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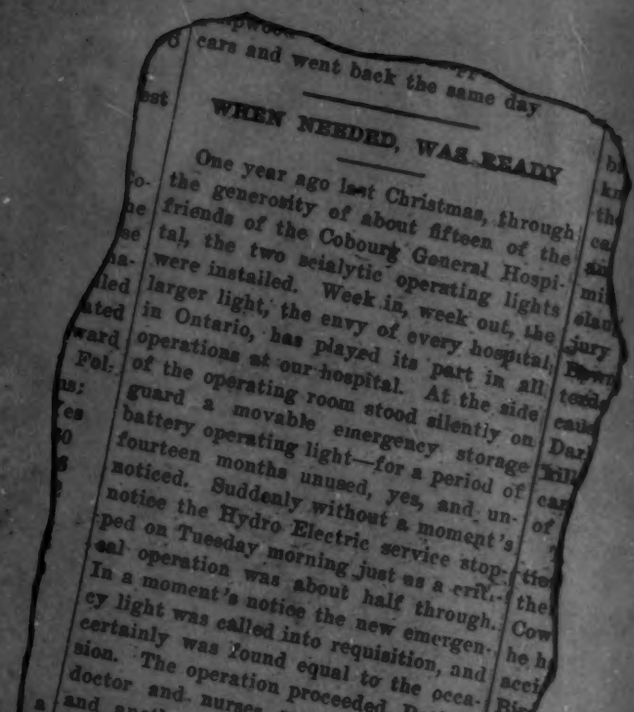

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From
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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXVIII *April 1927* No. 4

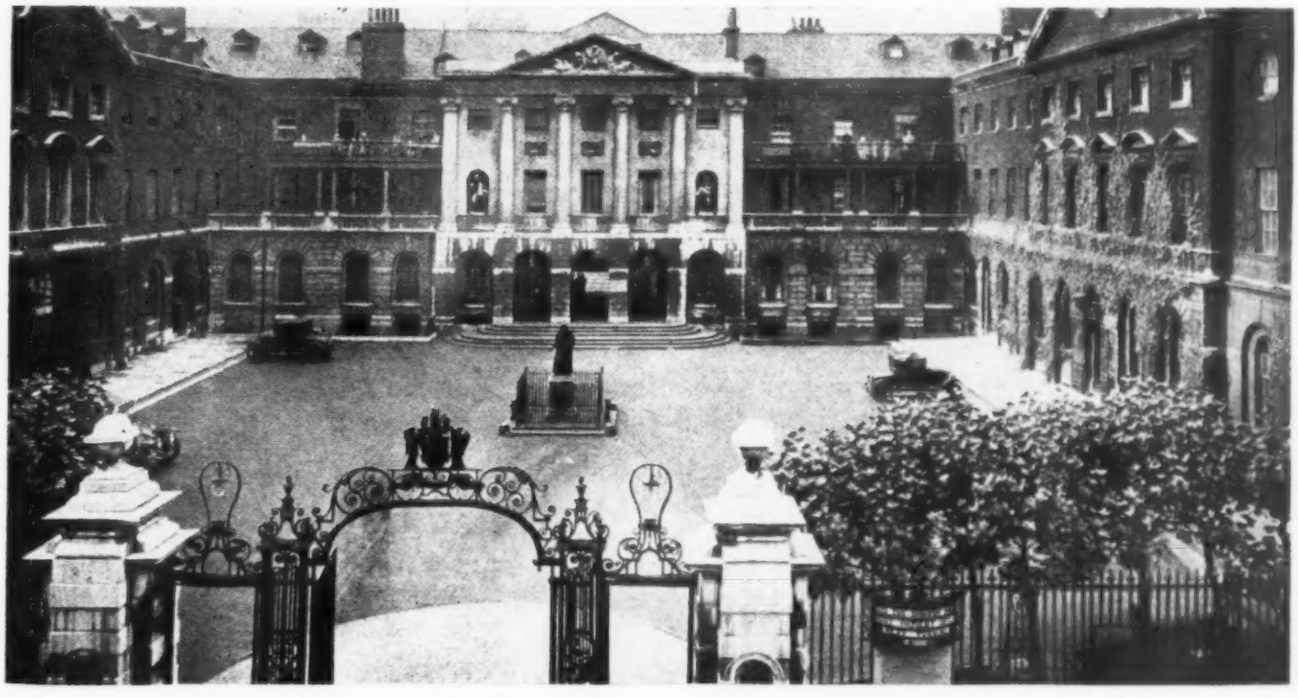
IMPRESSIONS OF A HOSPITAL VISITOR IN EUROPE

By **Michael M. Davis, Ph.D., Executive Secretary, Committee on Dispensary Development of the United Hospital Fund of New York.**

GENERALIZATIONS as to hospitals in Europe are unwise, for there is an enormous range of contrast between the fine institutions and highly developed hospital system of Copenhagen and the overcrowded and impoverished institutions in Warsaw. Yet, perhaps, there is something that may be said from the point of view of a traveler in mid-Atlantic, looking both ways.

An outstanding superficial contrast is, of course, between the vast amount of recent hospital construction and reconstruction in the United States and the slow pace to which post-war poverty has held most European countries during the same period. The technical elaboration of the American hospital from the point of view of construction and equipment is an expression of ingenuity combined with a plentitude of material resources. In Europe perhaps the same degree of ingenuity has been expended, but has been perforce directed to devising ways of making what little there is go farthest.

The psychology of hospital staffs, of patients, and of the community is alike conditioned by this pervasive factor. Patients expect far less in the way of personal service than in American hospitals. The junior medical staff does mechanical or therapeutic work that physicians and interns in America take for granted is in the hands of nurses, clerks or menials. Yet human satisfaction



Main entrance and courtyard of Guy's Hospital, London

depends, not so much upon what the individual receives, as upon the ratio between receipts and expectations. One's impression is that staffs and patients on the whole feel better satisfied than do ours in America. An eager-minded young resident physician in a famous clinic in Vienna, working unbelievably long hours, yet, if one could judge from his conversation and from the books and instruments in his room, finding time and energy to keep up with varied literary and musical interests; another young doctor in a hard-pressed hospital in Prague, somewhat worn by overwork and poor living conditions, yet, as his books, sketches, and conversation showed, keeping up rich interests in poetry and art; the table chat of a medical group in London: these suggest personal culture combined with professional technique that the hospital visitor in America is likely to seek in vain.

Specialism Versus Coordination

The establishment of service to private patients in the typical American hospital has undoubtedly contributed towards the elaboration of buildings and equipment affecting all divisions as well as private rooms. The well established continental type of hospital, with low, extended buildings, or with numerous relatively small pavilions covering a considerable area of ground, contrasts strongly with the characteristic and increasing American tendency towards compact, multi-storied structures. It is perhaps difficult to predict what will happen a generation hence, should our large hospital units move to the outskirts of cities. With the American climate and with high salary and wage schedules, there has been clear demonstration that the compact multi-storied type is more economical of administration. The great Rudolf Virchow General Hospital, Berlin, with 2,500 beds, set up in some thirty-six pavilions, covering a large area, is not only a series of physically separate units but an assemblage of equally distinct medical units. The typical American construction represents not only a different plan but a distinct conception of the hospital itself in organization and function.

I saw little in England or on the continent that suggests any conception of a hospital except that of a gathering of comparatively independent specialties, forming what might be called a symbiosis, rather than an organization, with a number of common administrative services. Small institutions, of course, show the subdivisions less clearly, but represent, indeed strive after, the same type so far as they can. We have specialism enough in America, in private practice and in hospitals, but the best medical and administrative circles now accept as sound the conception of a hospital as a unified medical organization, an organism one might say. This conception is coming to be reflected in the planning of buildings, in the establishment of unified records and admission systems, and in medical staff organization. The typical hospital abroad is also a larger unit than the American, and European cities are much freer than ours from the distressing exuberance of fifty to 150-bed institutions each initiated by a special religious, racial or medical group.

The effects of the War, while disastrous financially, have stimulated hospitals functionally, chiefly because a larger proportion of the population has been forced to depend upon hospitals, instead of home care, in serious illness. Housing congestion has combined with the necessity for economy in bringing about this condition. In Paris, Berlin, Vienna, Prague, Warsaw and London, the testimony was the same. The increased usage of the hospitals has doubtless also been stimulated by the removal of fear of these institutions through their enforced use by hundreds of thousands of soldiers during the War, and some consequent knowledge on the part of their families that hospitals are not places to which one goes to die. This demand for beds will doubtless lead to extension of existing institutions or to new hospitals as rapidly as finances permit, as was observable in England in the public hospitals.

Transfer from Home to Hospital

The transfer of a larger proportion of cases of acute disease from home to hospital care also has its effect on private medical practice. Few hospitals anywhere in Europe make provision for private patients. The care of a greater percentage of disease in the hospital rather than at home necessarily means that a certain proportion of middle-class cases, which formerly paid their private physicians for home care, now receive care in the hospital for which practitioners receive nothing.

Except in Great Britain and in Holland, the European hospital systems have always been preponderantly supported by public rather than private funds. In a number of countries the depreciation of the currency practically wiped out private endowments and caused privately supported institutions either to be formally taken over by public authorities or to be maintained by the public. Medical service for acute disease is thus provided to a larger extent than formerly in hospitals, and to a larger proportion by public authorities. Will the pendulum swing back with economic revival? It is doubtful.

One might have expected that the conditions

mentioned would have led to an expansion of out-patient departments, but the out-patient department is still thought of in Europe as a form of charity associated with medical teaching. Except in so far as the recent public health campaigns against infant and maternal mortality, tuberculosis and venereal disease have led to the development of certain clinics in or out of hospitals, and except as insurance organizations have developed clinics for their members, out-patient work has generally not grown up in the non-teaching hospitals. The organized medical profession in continental countries has generally strongly opposed out-patient departments except in the teaching clinics.

The growth of sickness insurance and other forms of social insurance is an outstanding European development that affects hospital and out-patient service, and their relations to medical practice and to the community. Insurance against sickness, which before the war covered a large proportion of the population in the German-speaking countries, in Great Britain, and in Scandinavia (less developed elsewhere), has extended substantially during the post-war period.

It will be recalled that the typical form of sickness insurance in these countries is the legal requirement that all persons earning less than a specified income shall be insured; that the benefits include medical care, also cash payments during sickness amounting to one-half or two-thirds of the wages; that the insurance be supported by weekly payments from the insured person and

Ground plan of the Rudolf Virchow General Hospital, Berlin, which has thirty-eight pavilions and 2,500 beds. The food service goes from a central kitchen to each pavilion by way of a large truck.

One of the convalescent homes, Königstetten, of the Federation of Sickness Insurance Funds of Vienna and lower Austria.

his employer with, in some countries, small additional contributions by the state; that the management of the insurance be in the hands of a society formed of all the insured persons in a district or all the employees of a given establishment—occasionally in other ways, the members of these societies electing a board of directors or managing committee. Employers and employees share in the management to a degree proportionate to their respective contributions. There is state supervision, but not state management.

So large a proportion of the population is now insured under these provisions that necessarily a very large percentage of hospital cases are entitled to medical care which the insurance society to which they belong is required to furnish. The society, therefore, pays to the hospital authorities an agreed amount for each patient, usually on a per capita basis. The rate of payment must be adjusted between the hospital authorities (usually municipal or state) and the insurance societies which are usually federated on a city or district basis. The payments by the societies are generally considerably less than the average per diem cost, and the determination of what the rate shall be is a matter requiring considerable negotiations, and occasionally arousing controversy, between the hospital authorities and the insurance groups. Thus, even in those countries where the whole hospital system is under public control, a considerable proportion of the cost of hospital care is paid for by the workers themselves, or partly by workers and partly by their employers, through the insurance societies.

A tendency of the insurance societies to develop out-patient clinics for the purpose of giving care to members or their families is appearing and has aroused controversy between the organized medical unions and the insurance bodies. I saw well equipped clinics providing medical service in a number of specialties, particularly dentistry, x-ray, electrical and actinotherapy, in Vienna and Prague, and I saw new buildings for these purposes under way in Prague and Cologne. In War-

saw an extensive system of all kinds of medical care was furnished for several hundred thousand persons through clinics, and in Berlin a remarkable system of thirty-eight clinics covered the city, providing out-patient and home service open to the million and a half persons—members and families of members—of the federated sickness insurance societies of Berlin. In Great Britain the sickness insurance established in 1912 is now accepted and approved in principle by the organized medical profession which demands only its improvement and extension, but the form which it has taken in Britain has prevented it from affecting the hospital and out-patient situation to any great degree.

The coordination of hospitals in a large community has been dealt with in a remarkable way in Berlin for an area including four million people. The city maintains a central hospital bureau to which all the chief hospitals report twice daily the number and type of vacant beds. All requests for admission that come by telephone to any hospital are cleared through the central bureau, to which physicians or prospective patients may also telephone directly. Persons applying personally for admission to a hospital may be admitted thereto directly, the hospital, of course, reporting to the bureau.

With this central admission bureau is correlated an emergency service covering the city with forty-two first-aid or emergency stations, somewhat more than half of which are connected with the hospitals. These stations serve for reception and first-aid treatment in emergencies, and from them also physicians may go on call to homes or industries to meet emergencies. One sees scattered throughout Berlin lamp-posts with red globes bearing the address of the nearest emergency station. The ambulance service, now entirely in control of the city, is correlated with this emergency service. In Amsterdam, a city one-quarter the size of Berlin, a central hospital admission bureau was also observed; in this case under the direction of the health officer.

New Type of Public Hospital in Britain

The hospital situation in Great Britain presents points of special interest to the United States. Most significant seems the rise of the public, and particularly the poor-law hospitals, to a position of importance. The institutions under the control of local boards of "poor-law guardians," were originally almshouses and workhouses, and were constructed as such. In recent years the increasing demand for hospital service on the one hand and the diminished number of applicants for poor-law relief (a diminution most frequently ascribed to the old age pensions and unemployment insurance, although other factors undoubtedly enter) have been bringing about a remarkable transformation of poorhouses into hospitals. Since this is the historical trend out of which the modern hospital in both Europe and America has developed, it need not occasion surprise, but in these institutions in England there has been dynamic progress since the war. In and around London, and in Liverpool, Manchester and Birmingham, the three provincial cities I had time to visit, I observed this development at various stages and in two phases. First, the type of patient has changed. Formerly these poor-law institutions received mostly old people and cases of chronic, mostly incurable, illness. Now a large proportion are cases of acute disease, general hospital cases. Second, the social scope of the institutions has broadened. They now receive not only the destitute but also persons who wish hospital care, not poor relief, and who are able to pay and do pay the cost of their care.

Modern Facilities Being Introduced

The transformation of these hospitals has required the remodeling of old buildings and of laboratories, the installation of x-ray and other facilities, which the original institutions did not include, and the development of nurses' homes. There was a good deal of recent construction, especially of nurses' homes, and much in the way of new plans. The medical staff is generally resident and on full time salary, but the utilization of part time specialists is beginning; in some instances there is a visiting staff and, in a few, a medical school connection. While a pauper stigma still legally attaches to these institutions, many of them are now actually in the position of what we would call in America a community hospital, frequented by self-supporting people who pay the cost of their care. Private beds to which patients come, under the care of their own physicians, were observed in some of these "poor-law hospitals," but this was exceptional. It is generally anticipated that within two or three years a law will be passed that will place these hospitals directly under the municipal authorities and wipe out their connection with the poor law and the last trace of the ancient stigma of pauperism connected with it.

While the medical staffs were often too small and were overworked, and equipment and nurses had not been secured as rapidly as was needed, yet no disinterested visitor could see a series of these transformed poor-law institutions without a feeling that they were responding to a widespread public demand for increased and improved hos-

pital service; and that the interest of the municipalities lay in the direction of supporting, improving and extending them. They seemed a highly significant, perhaps the most significant, factor in future hospital service in England. Their administrators, in all the institutions that I visited, were medical men with active minds and a forward outlook. They were dealing with questions of hospital policy as well as with housekeeping and finance. In attitude and function they were much more like the medical administrators of our large institutions than the typical administrator of most of the voluntary hospitals in Great Britain. In several hospitals they were greatly overburdened by a combination of clinical duties with administration.

The social and medical prestige possessed by the privately supported hospitals in England has, perhaps, insulated them to their disadvantage. The report of the Voluntary Hospitals Committee in 1921, the hospital report of the British Red Cross, and even the report of the last Voluntary Hospitals Commission in 1925, view the facts and tendencies of hospital policy from one side of the situation instead of from the center. Dr. F. N. Kay Menzies' paper on "The Future Relations of the Voluntary Hospitals to the Municipal Authorities," read before the British Hospital Association two or three years ago, represents an exception. The local Voluntary Hospitals Committee in one of the largest provincial cities seemed hardly aware, so far as their published report and conference with officers showed, that the hospital problem of their community related to anything outside voluntary institutions, although the poor-law hospitals included over 2,500 beds and were making unusually impressive advances in several directions.

Broadly Planned Surveys Needed

It is indeed true, as reports of the chief medical officer of the Ministry of Health have pointed out, that the statistics of the number of hospital beds in poor-law institutions are difficult to give accurately, since the number of beds assigned for the care of the sick, as distinguished from those for the care of the aged or infirm, is in process of rapid change. It might be said that because of this condition all the greater reason exists for broadly planned surveys of all elements in the situation, such as was suggested in Dr. Menzies' article mentioned above. The situation would be more wholesome if both voluntary and public groups would plan together and would come into organic contact in national and local associations and committees. Little of such relations seems apparent. The administrators of the increasing public hospitals, for instance, are practically all outside the British Hospital Association.

Experience in Canada and the United States indicates that for years to come there is room both for hospitals supported by private funds and those supported by taxes, and that their respective places will be most satisfactorily defined from the standpoint of both hospital and community if the two groups will, through their administrators, staffs and supporters, work out together the problems of hospital service to the community.

Old and New Charity

From the traditional point of view of the voluntary hospital in England, the principle of receiving fees from patients in return for service rendered appears in violation of the charitable purpose of the institutions. Contributions will be received, but not payment for services. It is a sort of British humor that in the poor-law hospitals, entering which makes one technically a pauper, one is expected to pay cost of care; whereas, in the voluntary hospital, which is said to be designed to prevent the stigma of pauperism and, if one would take some fervent pleas seriously, to maintain "the principles of individualism upon which our Anglo-Saxon civilization is founded," one is not allowed to pay for service rendered. One may contribute, but not pay. In two famous London hospitals I saw budgets in use in which various grades of income and sizes of family were listed, and opposite each the rate of "contribution" which might be reasonably expected. "What percentage of your patients pay the amount of 'contribution' that is 'suggested'?" I asked the admitting officer in one of these hospitals. "About 90 per cent," he replied.

The British voluntary hospital system has enough elements of importance, dignity and permanent value to make it unnecessary to justify itself by depending upon outworn conceptions of charity, or by standing aloof from evident public trends in hospital development. The establishment of a private patient pavilion in St. Thomas's and of a system of graded payments for various classes of patients in Kings College Hospital, South London, are entering wedges in a direction familiar to America.

More novel and more full of suggestion for us are the cooperative methods of securing support for hospital service by regular weekly payments from large numbers of persons who are organized through the establishments by which they are employed, or in other ways, and who are guaranteed hospital care when necessary in return for these small but regular contributions. Plans of this

kind have been worked out in Sheffield, Oxford, and probably elsewhere, while in London the Hospital Savings Association is carrying forward a promising experiment with the same idea of voluntary cooperative insurance, under the more complex conditions of the metropolis.

At Prague I visited a hospital of 250 beds at Podoli, a hospital unique in Czecho-Slovakia and of a rare type on the continent, because, like a typical privately supported hospital in America, it includes provision for a large proportion of pay and private patients, as well as a certain number (in this case a minority) of what we would call ward cases. It was founded before the war, on the American model, by the distinguished Czech surgeon, Dr. Jedlicka (who recently died), and was at first regarded as a daring and questionable innovation, but seems now to have won an established place. One can hardly judge, however, that this prefigures in any near future a great development of this type of hospital on the continent of Europe.

Such a visit brings me home with the feeling that in addition to such contributions as America has made to the structural and mechanical aspects of hospitals, it has developed at least three distinctive and significant contributions on the functional side.

First, the idea of the hospital as a place for coordinated medical practice, expressing itself in an increasingly unified medical and administrative organization of in-patient and out-patient departments, of the record system, and of the various other services.

Conception of Community Hospital

Second, the conception of the community hospital, an institution receiving all economic and social classes and receiving payment from them in proportion to their means and to the services rendered. This really means a conception of the hospital as a place for medical service for that increasing proportion of disease, incapacitating or ambulatory, for which adequate service requires the equipment and organization of an institution. The foundation of a hospital thus conceived is medical service, not charity—though charity is one of the cornerstones.

The same conception also underlies what may be called America's third contribution; namely, the hospital as a place for medical practice, offering the physicians of the locality facilities that they could not provide for themselves in equipment and in trained and organized personnel. The open staff hospital typifies this third distinctive contribution, the development and implications of which are not yet wholly clear. It has, however, already progressed far enough to manifest its increasing importance.

The conditions in any large country are like those in no other. It is foolish to expect that Europe can profitably copy our hospital development any more than we could wisely install European facsimiles. Much indeed we may gain from what Europe has to teach, especially in the cooperative measures developed abroad for the support and development of hospital and clinic work, from the spirit of painstaking as well as consecrated service which is so characteristic of the medical and nursing forces in many foreign institutions, and from the contributions to clinical medicine, technology and research which challenge our admiration because of the limited material resources with which they are associated and the high level of culture in which they originate.

DOES THE SCHOOL OF NURSING PAY?

In view of the difference of opinion that exists with respect to the economic advantages and disadvantages of maintaining the hospital nursing school, the experience of the Columbia Hospital for Women, Washington, D. C., is of interest. The school of nursing was discontinued July 1, 1925.

Regarding the results of the discontinuation of the school, the sixtieth annual report of the hospital, recently issued, comments that lack of a nursing school has proved more expensive than was expected. According to the report, at the time this action was decided upon the increased expense was estimated at $20,000 per year, but the experience of the year past indicated that it was nearer $30,000.

Salaries for graduate nurses during the past year cost $1.4316 per patient day, or approximately $1 more than the cost of nursing service when the hospital maintained a nurse training school. Regarding the cost of graduate nursing service, Dr. W. P. Morrill, superintendent of the hospital, says: "I regard $1 per patient day as about the difference in cost in nursing with graduates and pupil nurses. The maintenance cost of graduates is of course just as high as that for pupil nurses and the number of graduates needed is not many less."

The report further states that although the discontinuance of the school of nursing has not lowered the character of care given the patients the absence of formal teaching has hurt the morale of the nursing force and discouraged the alumnae.

HEALTH EXAMINATIONS GIVEN TO STAFF FIRST

St. Vincent's Hospital, Toledo, Ohio, has taken a definite step in the promotion of periodic health examinations by beginning at home in carrying on this work. At the suggestion of the Academy of Medicine of Toledo and Lucas County, the hospital has made arrangements to examine the forty physicians who are members of the staff. The work is being carried on under the direction of Dr. C. W. Waggoner, chief of the medical department, with the assistance of the medical staff.

SOME SPECIAL FEATURES OF THE PRESBYTERIAN HOSPITAL OF COLORADO

By Demetrius Tillotson, Superintendent, Presbyterian Hospital of Colorado,
Denver, Colo.

ONE of the distinguishing features of the new Presbyterian Hospital of Colorado, Denver, is its ideal location on one of the highest points of the city. It is situated on six undivided city blocks in almost the exact center of Denver yet is removed from traffic and other noises of the city.

The hospital was begun during the War and the cornerstone was laid in 1921. However, the building, which at that time was uncompleted, was forced to close until March, 1925, when contracts were let for the completion of the hospital, with its power plant, laundry and kitchen buildings. The complete plant including the site has cost about one million dollars. At the present time the hospital has a capacity of 170 beds and it is planned eventually to increase it to 350 beds by the addition of wings provided for in the will of the late Senator Samuel D. Nicholson. The hospital was opened under the auspices of the Presbyterian Church in March, 1926.

The building was designed mainly for private rooms, two-thirds of the rooms being single, while one-third are double rooms equipped to accommodate two patients. The patients' rooms are planned so as to take full advantage of sunshine offered by the location, and are equipped each with a telephone and lavatory with hot and cold running water, and have a bath adjoining.

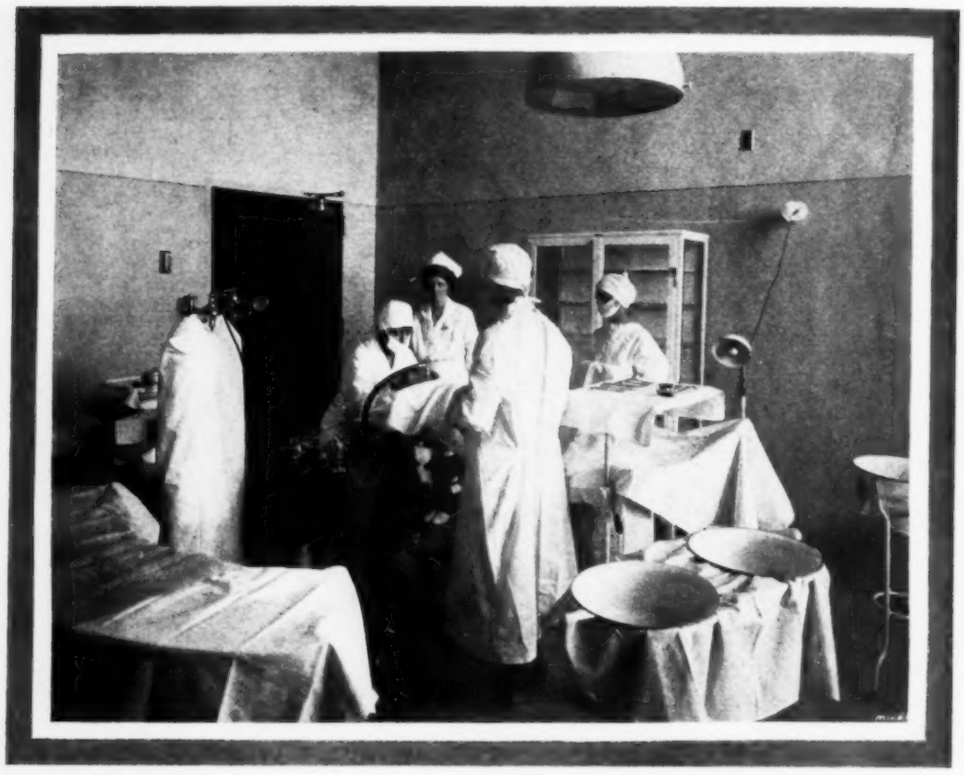
The only ward in the building is located on the sixth floor which is well supplied with windows insuring a maximum of sunlight and fresh air at all times.

In addition to the sun rooms and solariums for convalescents, provided on each floor, the sixth floor has a large solarium furnished for the convenience of patients and friends, with large roof gardens on both sides of the room. There convalescents can bask in the sunlight almost every day in the year and overlook the snow-capped Rockies from Pike's Peak on the south to Long's Peak on the north, view of the mountains stretching a distance of 150 miles.

The hospital has made an effort to combine its natural advantages with the most modern facilities for the patients' comfort and enjoyment and this idea has found particular expression in the matter of food service, for the handling of food is one of the special features of the hospital. All food is prepared in the kitchen on the first floor, which is not under any portion of the main building, and is carried by means of dumb-waiters to the five diet kitchens, one on each floor. In the diet kitchens the cafeteria system has been adapted to hospital usage. Each is equipped with a steam table, serving counter, ice vat, refrigerator, table for trays and silver, small stove and a phone that connects with the main kitchen. Each diet kitchen is in charge of a maid who works under the dietitian and fills the trays that are carried to the patients by the nurses.

All dishes from the five diet kitchens and the

Viewing the 150 mile stretch of Rocky Mountains from the roof garden of the hospital.



A view of the operating room showing the patient in the process of being anesthetized.

main dining room are sent to a sub-basement room by means of dumb-waiters and are washed in an electric dishwashing machine. They are then sent back to the floors and placed in the steam tables where they are kept warm until the next meal. This system has proved remarkably successful and has received favorable comment from patients and everyone who has visited the hospital.

The hospital is fortunate in being able to avail itself of the extraordinary well water that may be had in this vicinity by sinking a well to the depth of eight hundred feet. Like many of the hotels and manufacturing plants of the city, the hospital

A section of the pathological laboratory, which is conducted on the flat rate basis.

has its own well that furnishes the entire supply for the institution. The well provides eighty-two gallons a minute and the water is lifted to the surface by releasing compressed air in the water column.

The fifth floor houses the surgery which includes four major and two minor operating rooms, with accessory rooms and a plaster room. The x-ray laboratories also on this floor consist of five rooms, including the radiographic, fluoroscopic, cystoscopic, viewing and consulting rooms, and a completely equipped dark room.

For the convenience of patients whose condition does not warrant their removal to the x-ray department a special bedside unit is available together with a portable cystoscopic table which can easily be removed to any part of the building.

To facilitate the treatment of emergency cases, the hospital has a special receiving and examination room located at the ambulance entrance on the ground floor. This room is equipped for surgical work in cases where immediate attention is needed, so that there is no delay caused by transporting the patient to the fifth floor.

The maternity department is housed in a wing on the fourth floor quite apart from the other services. The nursery has twenty-two bassinets.

Isolation cases are housed in a special section on the ground floor of the building where they are removed from contact with other patients and the traffic of hospital service.

Throughout the designing of the building and the selection of its equipment advantage has been taken of the latest improvements in mechanical devices and waste prevention methods that promote efficiency of operation. The incinerator system, which is the latest type, connects direct with all the floors so that refuse need only be emptied into the trap door to be destroyed without odor or smoke. The signal system assures patients of prompt service at all times. When a patient touches the button, six checks are visible on the silent call, one of which shows the room number in the office of the superintendent of nurses, where it flashes until the call has been answered.

The hospital was built so that it can be easily expanded to a 350-bed capacity without interfering with the existing services. The surgery, laboratory, kitchen power plant and laundry have all been planned so that they will be adequate to serve the needs of the institution when it is expanded by the addition of the proposed wings in the near future.

A front view of the hospital.

IS AN ARCHITECTURALLY ISOLATED BUILDING ESSENTIAL FOR A LYING-IN HOSPITAL?

By J. Whitridge Williams, Obstetrician-in-Chief, Johns Hopkins Hospital, Baltimore, Md.

I HAVE been requested to express an opinion concerning the views advanced by Dr. De Lee in his article, "What are the Special Needs of the Maternity?" which appeared in the March issue of THE MODERN HOSPITAL. I do so first, because Dr. De Lee is a friend whose opinions I value highly, and secondly, because, while I do not agree with all of his contentions, I feel that his article will serve a useful purpose in provoking discussion concerning the construction and management of lying-in hospitals, and particularly by laying stress upon the, as yet, imperfectly recognized necessity for realizing that makeshift accommodations can no longer be tolerated, and that the best is not too good for an obstetrical service.

The gist of his contention is that the only means of diminishing, but not abolishing, puerperal infection is by insisting that the maternity hospital must be an architecturally isolated structure, which, if it forms part of a general hospital, must have no structural connection with the other units. Dr. De Lee contends that infection is favored by any contact with the medical and surgical services, and, consequently, can be prevented only by having the maternity completely isolated and provided with its own kitchen and laundry, and with special living quarters for its medical, nursing and domestic staff. Indeed, he goes further and claims, as connecting corridors or porches are a source of danger, that access to the building should be had only through the open air. He concedes, however, that infection is unlikely to be transmitted through conduits for heat and power or by electric light or telephone wires. Furthermore, he insists that such isolation is not sufficient, but that a second entirely separate building is essential for the segregation of infected patients, and, like the main maternity, it should also possess living accommodations for its medical, nursing and service staff, with separate kitchen and laundry.

Are such views correct? If they are, the expense of putting them into effect will be so great as to preclude any great extension of hospital care for obstetrical patients, except in the largest communities and in connection with the richest institutions. On the other hand, if they are incorrect, it is unfortunate that the enthusiasm of a gifted man should lead others to idealistic extremes of doubtful value.

I do not consider that such radicalism is essential either from theoretical considerations or from my own personal experience. No one who is familiar with the institutional care of the sick would dare to claim that infection of any kind can always be prevented. If Dr. De Lee's contentions are correct, it should be impossible to maintain any service for infectious diseases without the frequent occurrence of cross infections, and yet everyone knows that satisfactory results are obtained in hundreds of institutions. Likewise, his views should preclude the possibility of conducting a first rate surgical service, as I hold that just as rigid an aseptic technique is necessary to insure that practically every clean wound will heal by first intention as to prevent the occurrence and spread of puerperal infection. For these reasons, I cannot avoid the impression that his conten-

What Practice Warrants

DR. WILLIAMS takes issue with Dr. De Lee in the contention that the maternity should be housed in a separate building as the only safe way to prevent cross infection. Basing his argument on practical experience, Dr. Williams points out that architectural isolation is not needed as a safeguard against infection, provided that the services of the hospital are well arranged and that rigid aseptic technique is carried out, and if such technique be lacking even complete isolation will be of no avail.

Even if architectural isolation could be generally effected, the experience of maternity departments in the general hospital, the prevailing type of arrangement, does not warrant the separate building. And if the "idealistic extreme" were the only safe way to conduct maternity service the cost of this arrangement would mean that such service could be carried on only in the large wealthy institutions.

tions are based upon imperfect appreciation of the possibilities of rigid aseptic technique, and possibly depend upon a lack of personal experience in the intricacies of practical bacteriological technique. Finally, I would submit that his suggestion, that the history sheets of patients in the isolation pavilion should be sterilized in formalin vapor before being returned to the record room in the main building, represents a degree of caution that approaches "infectio-phobia."

Separate Building Not Essential

I hope that my remarks will not be misunderstood, as it must be admitted that it should be easier to prevent the occurrence of infection in an architecturally isolated maternity than in one freely connected with a general hospital. At the same time, I contend that equally good results can be obtained in the latter type of institution, provided that reasonable intelligence is displayed in planning it and in the practical conduct of the service; while, on the other hand, if brains and technique are lacking, disastrous results will be obtained in the most ideally planned building.

When the obstetrical service of the Johns Hopkins Hospital was organized in 1895, funds were not available for the construction of a suitable building, and makeshift accommodations were improvised in a part of the original isolation ward. This was a basement and one-story structure, whose ground floor was divided into two unequal parts by an enclosed corridor, through which all the traffic of the hospital passed on its way to the pathological building. The upper floor consisted of a longitudinal corridor, with a series of fair sized rooms on either side, each provided with an open fireplace and its own system of ventilation. This floor was divided into two parts by a hollow tile and plaster partition, the smaller fraction being used as the isolation ward for the entire hospital, obstetrics included, and the larger fraction for the delivery rooms and for beds for eighteen puerperal women. The corresponding portion of the basement was utilized as a dormitory for waiting patients, examining rooms and other purposes, while its main entrance opened directly from the corridor just mentioned. Furthermore, access to the stairs leading to the isolation ward was from the same corridor, not twenty feet away from the entrance to the obstetrical ward.

Naturally, no one would contend that such conditions were ideal; nevertheless, the quarters were used for nearly a generation as an active teaching clinic with no evidence that a single obstetrical patient suffered from the adjacent isolating ward, which, from time to time, housed every variety of infection from erysipelas to small-pox.

Furthermore, the physical conditions in the old ward, which was always crowded, were far from ideal; yet, thanks to the efforts of a succession of intelligent head nurses and the instruction of the assistants in the fundamental principles of aseptic technique, serious infection rarely occurred and at no time caused anxiety. It might be added that the nurses lived in the general nurses' home, while the meals for the patients were served from the general kitchen and the wash was cared for in the laundry of the hospital. This experience caused me to disregard the practical significance of air as a carrier of the streptococci which cause puerperal infection, and to relegate the belief to the same category as the "sewer gas" theory of our fathers and grandfathers. On the other hand, I attached the greatest importance to the maintenance of the most rigid aseptic technique and insisted upon the greatest restriction possible of vaginal examinations during labor.

I might add that I was trained in great part in the pathological laboratory, and take pride in the fact that practically every patient who dies on the service comes to autopsy, which I always attend if possible, accompanied by as many assistants as are free. I have never been separated from the autopsy table by a "breast high barrier," but always stand alongside it, so that I can closely watch and sometimes guide the pathologist. Naturally, I take care not to touch the cadaver or to handle the tissues until after they have been hardened in formalin or in some other suitable fixative. Yet in my entire experience, I do not recall a single instance in which this practice has had any deleterious effect upon the well-being of my patients; and I do not say this in the spirit in which Meigs defended himself in the controversy with Oliver Wendell Holmes, when he said "but a gentleman's hands are clean"—as I know better than most people what bacteriological cleanliness means, and how easily infection can be carried.

Experience of Johns Hopkins Hospital

Furthermore, when the new women's clinic of Johns Hopkins Hospital was constructed many conditions were perpetuated which Dr. De Lee would consider anathema. For example, the same corridor runs through the basement as through the original ward, and one end of it communicates with the pathological laboratory by an unlocked door. Moreover, as a temporary expedient, pending the construction of the new medical clinic, the temporary isolating ward for the entire hospital occupies one of the basement wings of the H-shaped building, but as yet no evidence has de-

veloped that infection has been transmitted to a single one of the obstetrical patients who occupy the four floors above it. Again, it may be admitted that the last named expedient is not theoretically ideal, yet, when the wing is eventually evacuated, we hope to utilize it for the isolation service of the women's clinic, and we shall do so with a clear conscience.

Accordingly, it is evident that our experience at the Johns Hopkins Hospital does not indicate that architectural isolation is essential to the proper conduct of a lying-in hospital, and for that reason we consider that Dr. De Lee's contentions represent an extreme view. On the other hand, I believe they will serve a useful purpose by directing the attention of architects and of boards of trustees of general hospitals, who are contemplating the construction of an obstetrical service, to the necessity of so planning as to reduce to a minimum the possibility of the transfer of infection from one service to another. For this reason, I believe that obstetrical wards should not immediately adjoin those for general medical or surgical patients, and that the professional and nursing services should be individual and distinct. Furthermore, I unhesitatingly condemn the common use of operating suites for surgical as well as for obstetrical patients, as is usual in many small hospitals. It is my opinion that sufficient isolation can be secured by having the obstetrical service on one or more floors of a hospital, which are used for that purpose and for no other, and that it is a matter of practical indifference what type of patients occupy the floors above or below, so long as a really rigid aseptic technique is employed by the medical staff, and the best traditions of intelligent nursing are followed.

Special Isolating Service

In a small hospital, I do not consider that a special isolating service is essential, provided the febrile patients are at once segregated, and are cared for in rooms set apart for the purpose. In that event, with intelligent nursing service, it is possible to attain a degree of isolation that should accomplish the purpose in view, namely, the protection of the normal patients. On the other hand, in large maternities, the development of a special isolating service constitutes an important administrative measure, but, to my mind, its location is a matter of relative indifference so long as it assures actual separation of the infected patients and makes it difficult for the nurses in charge of them to come into personal contact with afebrile patients. Indeed, I am almost prepared to go so far as to say that I should oppose the erection of a spatially separate isolation building, in the belief that it would do more harm than good by fostering erroneous views as to the significance of infection and by eventually destroying in physicians and nurses the belief in the efficacy of our means of coping with the spread of all infections.

Passing briefly to the secondary parts of Dr. De Lee's paper, I am glad to say that I agree with many of the points he has made. In the first place, he is entirely right in insisting that the obstetrician who is to have charge of the new service should take an active part in the preparation of its plans. Upon several occasions boards of trustees have submitted to me, with great pride, plans for new lying-in hospitals, and, upon asking my opinion, have been told that the best thing they could do would be to burn them, and then to select a competent hospital architect, to appoint the obstetrician who is to conduct the service and to allow them to develop the plans in common. Such advice was at first considered drastic, but it was eventually adopted to the mutual satisfaction of all concerned.

Agree on Location and Size

The advice concerning location and size is eminently sound. Everyone acquainted with hospital construction agrees that proper orientation with a view to obtaining the greatest possible amount of light and air is of prime importance, and in most parts of our country ample provision for large open porches, and solariums cannot be insisted upon too strongly. I thoroughly agree with Dr. De Lee concerning the question of size, as I consider that 200 beds should represent the maximum capacity of the largest lying-in hospital. Indeed, if the service is to be directed by a single head, which is the only feasible plan in a teaching hospital, I should regard 125 to 150 beds as sufficient, as it is difficult to supervise properly a larger material, and quality rather than quantity of work should be the prime consideration.

Dr. De Lee does well to insist upon the necessity for abundant facilities in the way of first stage, delivery and operating rooms on the labor floor. It is frequently difficult to impress this upon those who are familiar only with the needs of medical and surgical services, or to convince them that the characteristic feature of an obstetrical service is the frequent occurrence of "peak" loads, and that accommodations which are more than ample one day are quite insufficient the next. From my own experience with a relatively small service, it frequently happens that during one twelve hours only one or two patients may be present in the delivery floor, yet during the next twelve hours eight or ten women may be in labor at once, and thus subject the physical accommodations, as well

as the medical and nursing service, to the greatest strain. Similar considerations apply to the ward accommodations, so that if the capacity is based upon the calculation that fourteen days represent the average turnover of patients, it will happen that at times the beds will be relatively empty, while a day or two later they will be insufficient to supply the demand.

Noise and Soundproofing

I also welcome Dr. De Lee's strictures concerning noise, and I agree with what he says concerning the necessity for, as well as the difficulty of, securing adequate soundproofing. It should always be remembered that a labor floor is relatively noisy, and that the steel and concrete construction now in vogue serves to conduct sound in a manner unknown to older methods of construction. Consequently, architects, trustees and physicians should bear this in mind and make every effort to cope with it, although I fear that for years to come their efforts will be far from satisfactory. From one point of view, such noise is partly pardonable, but to my mind one of the horrors of all hospitals is the unnecessary noise resulting from the careless handling of utensils, and especially from loud talking by the hospital personnel and visitors, to which the patients contribute but little. It is my experience that a single enthusiastic physician or nurse with a high pitched voice may make an entire floor unbearable, and yet I suppose few would advocate cutting their vocal cords, as is sometimes done in experimental laboratories in the case of noisy dogs.

I also agree with his advice concerning commodious service rooms, and the necessity for overcoming as far as possible the nuisance of conveying bedpans long distances. In ward services much may be done by locating the service rooms centrally, instead of at the ends of the ward; while in private and isolating rooms the desirability of individual provision for the care of bedpans is well worthy of consideration. I also consider it essential that basins with running water be installed in every room, and that the spigots be so arranged that they can be utilized for drawing water into vessels, as well as for washing the hands. This can be accomplished by placing them sufficiently high above the basin, or better still by having extra outlets below it.

I also heartily endorse his recommendation that rest and study rooms be provided for the medical staff. In hospitals in which a considerable proportion of the patients are attended by outside physicians such provision adds greatly to the efficient care of the former by encouraging the latter to spend a longer time at the hospital, especially at night, instead of being hurriedly summoned at the last moment. Moreover, in a service of any size, I consider it imperative that comfortable sleeping quarters on the labor floor be provided for the responsible assistant, so that he may be available at a moment's notice. Where this is the case, it frequently happens that he will see the patient personally, instead of relying upon telephone instructions to a nurse, as so often happens at night when his quarters are at some distance.

I could go on indefinitely agreeing with many other suggestions of Dr. De Lee, and, on the other hand, I might take issue with others, did time permit, or did I feel that it would serve a useful purpose, but I think I have said enough to make my meaning clear.

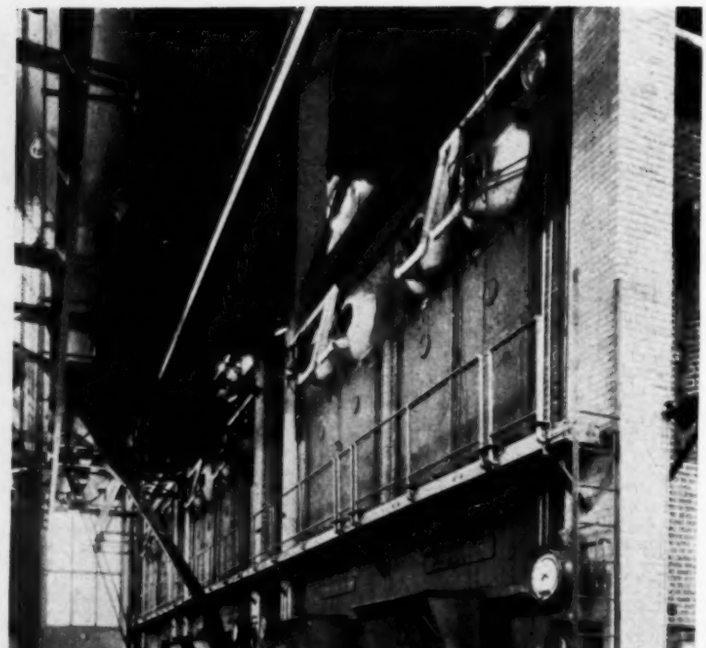
In a general way, it may be interesting to others to learn the difference in point of view of two men who have spent many years in the conduct of obstetrical services, and I think that they are partly explicable by our different upbringing. Dr. De Lee has spent most of his time in a special hospital, while I have grown up in a large general one, devoted to the care of patients, to teaching and to research and in which obstetrics is only one of the interests involved, so that I have learned to evaluate its importance both from the point of view of the interests of the community and of the rounded education of medical students. Indeed, I may go a step farther and state my conviction that if Dr. De Lee and I were to discuss the matter face to face it would turn out that our differences are even less radical than they appear at first glance and are really more apparent than real.

REGULATING VISITORS' CALLS

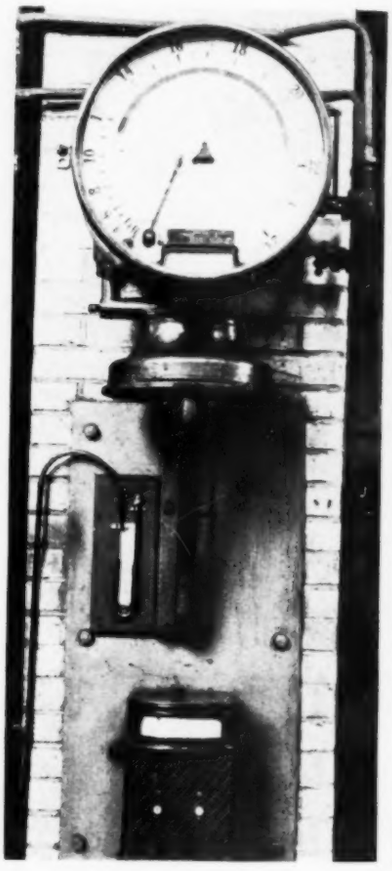
As rules concerning visitors and visiting hours vary with the type of hospitals and in different localities, those of a particular institution are of interest as a basis of comparison.

At the Los Angeles General Hospital, Los Angeles, Calif., a patient may have not more than two visitors at one time. The same visitor may see a patient not more than once in one day. A visit is not to last longer than twenty minutes and may be terminated at any shorter time at the discretion of the nurse in charge. Longer visits on the children's wards may be permitted by the nurse in charge. Exceptions to the foregoing general rules are permitted only when a special pass is obtained from the superintendent of nurses' office.

Callers are to visit only their friends and relatives. All articles of food and drink and drugs brought for the use of patients are to be given to the nurse who later gives them to the patient only upon the approval of the physician in charge. Children under fourteen years of age are not permitted to visit in the hospital unless a special pass is obtained from the superintendent of nurses, granted only in cases of urgent necessity.



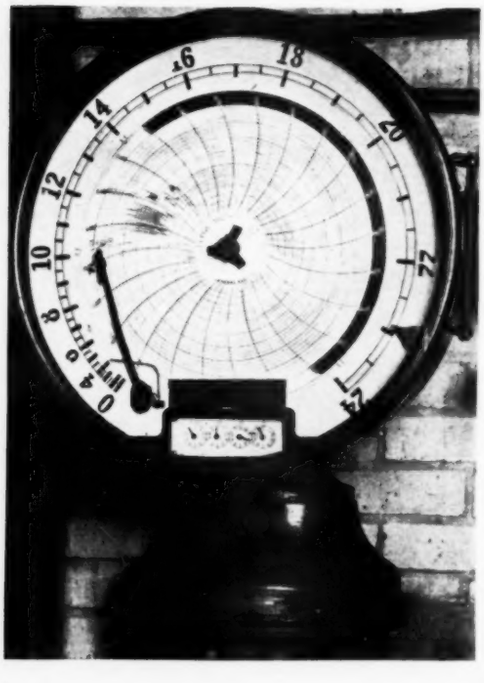
Instruments in the Boiler and Power Plant, Johns Hopkins Hospital



Right, one of the eight steam flow meters. At the bottom is a CO_2 recorder connected with boilers No. 1 and 2, the connection being made by pressing one of the buttons in the instrument.

Above, interior view showing the battery of six 4,570 square feet water tube boilers, four of which are equipped with motor-driven stokers.

Above, the 2,000 H.P. steam flow meter which registers the steam passing through the twelve-inch line leading from the power plant to the hospital.



Left, the 800 H.P. steam flow meter which operates on boiler No. 5. About 23,000 pounds of steam was being generated when the picture was taken.

PLANNING FOR FUTURE EXPANSION

By Isadore Rosenfield, B.S., M. Arch., Architect,
New York

BEFORE entering upon the discussion of the methods of hospital expansion, it is well to state certain basic premises.

1. The designations small hospital and large hospital are relative, as it is not possible to say when a hospital ceases to be small and enters the category of a large hospital.

2. In view of increasing population and the fact that the country is yet largely underhospitalized, it is safe to assume that every institution that is appreciative of its community's needs must constantly expand.

3. The modern tendency of concentration of population in urban communities leads to centralization of hospitals into even larger institutions.

4. The progress of medical science constantly demands the creation of new hospital departments.

The above premises indicate the desirability of creating interest in the discussion of methods of hospital expansion with a view toward bringing order into these methods. Students of hospital planning realize the tendency to haphazard growth that still persists in many hospitals and perhaps constitutes the largest item of waste in our hospitals.

Vertical or Horizontal Expansion?

At the 1925 meeting of the American Hospital Association, the committee on buildings—construction, equipment and maintenance submitted a report that ends with the line "scheme for future enlargement (horizontal vs. vertical)." The answer to the question implied in this statement must vary according to circumstances, as every building project presents particular problems that must be solved in the light of local conditions. However, there must be certain underlying principles that should guide the expansion of a hospital, and these principles should not be determined entirely by the land available, but rather by the factors of economy of construction, cost and convenience of operation and cost of replacement.

Quite frequently a hospital begins with an old residence on a suburban plot. The building is remodeled to suit the immediate needs and the next step is the addition of a small two-story building with a pitched roof. As time goes on, other small buildings of two or even three stories are added and before long the entire land available is covered by small structures. It is safe to say that a hospital developed in this manner costs a great deal more than a hospital of the same capacity would cost were it originally designed on a compact building scheme. When we consider the cost of maintenance and inconvenience of arrangement in such a hospital, it is evident that the waste of money and human energy must be great.

Difficulties of Horizontal Expansion

The last small building added to the lot is usually the last straw on the camel's back, and, while the metaphor is mixed, the hospital finds itself with a white elephant on its hands. There is no centralized administration; the grouping and orientation of the buildings are usually haphazard and the distances are so far that, as one harassed superintendent said, roller skates would be useful in going from building to building.

The next step is the tearing down of the small buildings to be replaced by modern multistory buildings. For every dollar spent on the new building a dollar's worth of the old building is thrown away, because usually it is impossible to make use of the old materials to any appreciable extent.

What then is the proper method of hospital expansion? It must be assumed that a survey of the needs, present and future, has been made and the immediate and ultimate bed capacities determined. At this point, every hospital may ask how to expand horizontally or vertically.

From the point of view of the welfare of the patient, there are instances where horizontal expansion is preferable. For example, it is decidedly more convenient to house convalescent patients in low buildings. In this class may be listed ambulant tuberculous patients, the mentally ill after they have passed the stage of observation and intensive treatment, cardiac and orthopedic cases after the need for bedside care has passed and convalescents in the general medical and surgical groups. However, these groups form but a small percentage of the hospital population of the country, and in housing these groups a good deal of money can be saved by proper grouping of buildings, when the saving of money is a consideration, as is almost always the case.

The cottage type hospital is a case in point. Cottages vary from one bed to fifty beds or even greater capacity. Should they be one or two or three-story cottages? Should they stand apart or

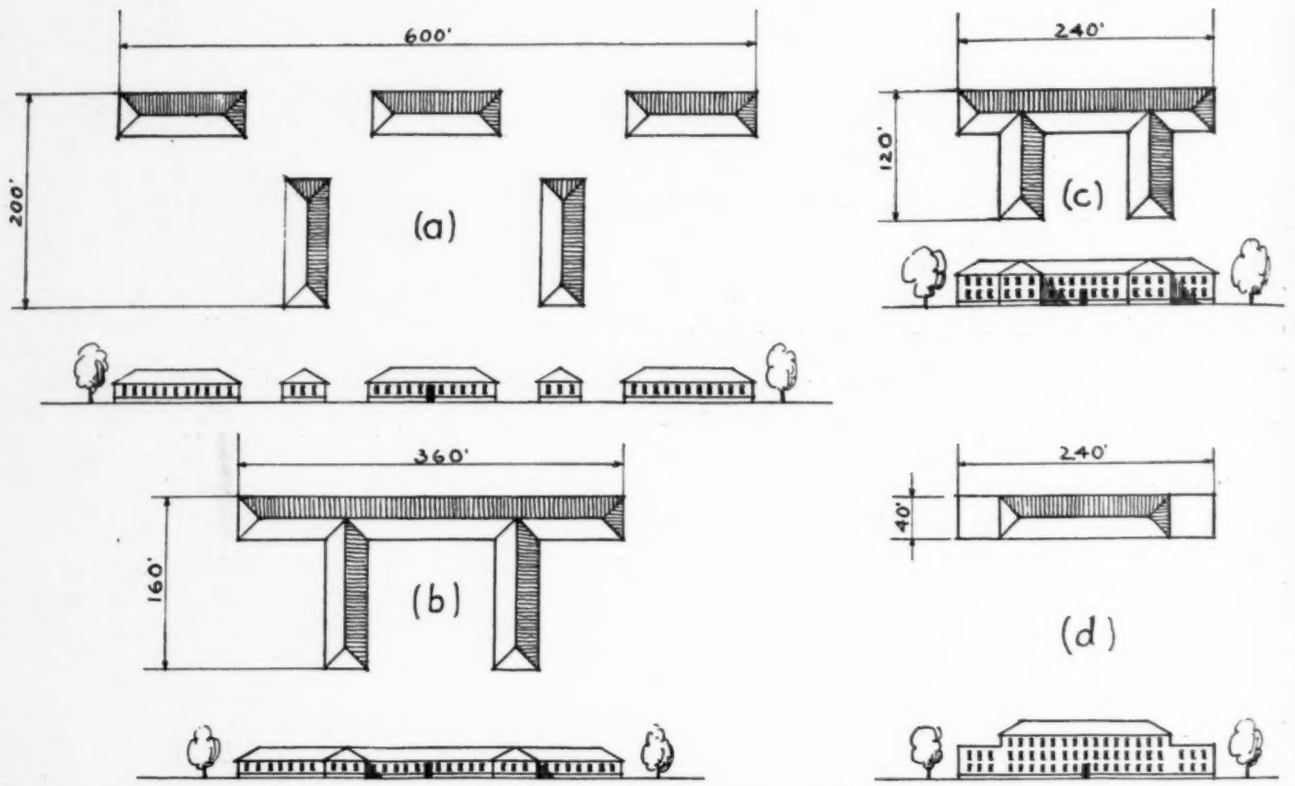


Fig. 1. (a) A group of detached cottages; (b) same cottages attached; (c) same capacity provided in a 2-story scheme; (d) same capacity provided in a 3-story scheme. By "capacity" is meant the actual usable space, apart from space in the roof and under the first floor.

Table Showing Proportion of Ineffective Cubage in Each Scheme Above

	Ineffective cubage	Effective cubage	Total cubage	Percentage of ineffective cubage
Scheme A	216,000	264,000	480,000	81.8
Scheme B	216,000	264,000	480,000	81.8
Scheme C	122,000	264,000	386,000	46.2
Scheme D	60,800	264,000	324,800	23.0

By "ineffective cubage" is meant the cubical contents of the roof space and the space between the ground and the first floor.

in groups? By placing cottages in semi-detached groups, economy is affected. When two cottages meet with a common or party wall, an immediate saving of one wall and foundation is the result. The distance of travel between cottages is thus reduced, and the run of water, steam and other pipes and conduits shortened. It is also more economical to build a few two-story cottages than twice that number of one-story cottages.

At this point it is well to recommend that all institutions for the sick should be of fireproof construction. Fireproof structures cost more in the beginning, but they are cheaper to maintain and they last much longer than non-fireproof structures. The most important argument against inflammable structures, however, is the fire hazard. Many persons are of the opinion that one-story non-fireproof structures are not a serious danger to human life in the case of fire.

In the article "Building to Prevent Fires" in THE MODERN HOSPITAL for June, 1926, p. 497, A. L. Bowen makes the following statement:

"In view of the fact that the building that burned at the Chicago State Hospital (Dunning, Ill.) was originally a tuberculosis hospital, only one story high, and patients could leave it at any point, and yet in the presence of fire twenty-one people burned to death, seems to call for a revision of a theory indulged in by many hospital authorities. It is always the unexpected that happens, and ease of exit is no guarantee against panic or the frightful rapidity of fire and heat in an open frame structure of large dimensions."

The next consideration is the hospital for patients where proximity to the ground is not a factor, and this type indeed constitutes the bulk of our problem.

Every building has only one roof and one foundation. Whether a roof covers one story or twenty-five, its cost is about the same. The cost of a foundation for a two-story building is usually not much less than the cost of a foundation for a four-story building, and the added cost of the foundation for additional stories above four is negligible. On the other hand, the cost of a foundation of a ten-story building compared with the cost of five foundations of five two-story buildings of the same area shows a vast difference. Without enumerating the various other items of construction, it can be stated with certainty that a multistory building is cheaper than a two or

three-story building of the same floor space.

This statement needs the following modifications. It is generally accepted that a hospital is considered to be of the pavilion type up to three or four stories. Anything higher than that is considered a multistory building, but economy of vertical over horizontal expansion ceases at a certain point, depending upon local conditions. Thus we are informed that in a certain locality in New York City it would be more economical to build two buildings each fifteen stories high than one building thirty stories high. It is erroneous to assume that any building is economical simply because it is a multistory building. It must first be determined what floor dimensions comprise an economical unit. In large cities where land values are high, the area of the hospital floor is more or less predetermined by the dimensions of the lot. In most other cases, however, this is not a limiting factor and the area of a floor can be deliberately determined.

Economical Unit Not Yet Determined

Hospital buildings are generally about forty feet in depth. What, then, should be their length? This question should be answered largely from the point of view of economy of administration as well as economy of construction and equipment. The administration and installation of equipment on several short floors in a multistory building is almost as wasteful as if the same building were strung out in small buildings covering several acres. Unfortunately, hospital administrators have not yet determined what is an economical unit of hospital administration and as yet no standards exist for guidance in this matter. Undoubtedly, the size of a unit should vary with the type of cases treated; and also the type of accommodation, that is, whether the patients are housed in wards or in private rooms. Nevertheless, flexible standards are needed that will give a fair range for each type. Counting the number of beds per floor in many hospitals of similar type, it is found that they range from but seven or eight beds to some hundreds. In short, the rule-of-thumb method still prevails for determining the floor unit. It is obvious, however, that it is more economical to provide all the necessary services, such as serving room, utility room, surgical dressing room, medicine closet, linen room, nurses' station for, say, fifty patients than it is to provide all such services for, say, twenty patients. What is true of the equipment and the space is also true to a certain extent of the personnel needed to tend the equipment. In other words, it takes less personnel per patient to attend to a fully equipped unit for fifty patients than it does for a unit of twenty patients. In the absence of definite standards, the experienced planner will gauge the size of the floor by seeing to it that, on the one hand, he has a sufficient number of patients for a minimum of equipment and personnel and, on the other hand, that he has not overloaded his personnel and equipment with too many patients.

Assuming then that the length of a floor has been determined and that it is more economical to expand vertically than horizontally, the number of floors to be built at first can be determined by the number of beds immediately needed, and the ultimate number of floors required can be determined by the estimated future needs. This, unfortunately, is rarely done. The writer has in mind several examples where a hospital found its new building overloaded only a few years after it had been erected; yet there was no alternative but to construct another building at a great expense, instead of adding one or more stories to the original building.

The method of building a story at a time instead of a building or a wing at a time reduces the temptation to overbuild. There are many examples of buildings with more stories than are required for the present. These stories calculated to take care of future demands represent idle capital, and to this idle capital must be added interest charges that perform no service for the community.

On the other hand, it is not always possible to add new stories to existing buildings, unless such buildings were designed from the outset to take additional stories. The difficulties of adding new stories to existing buildings are many. Usually, the foundations, columns and walls are not strong enough for the additional load. Quite often the construction of the roof does not permit the addition of new stories. The most expensive roof is a pitched roof, yet many hospitals have this type. Whether the roof is pitched or flat, the difficulty exists as long as the roof is built of wood.

When adding a new story to a building with a

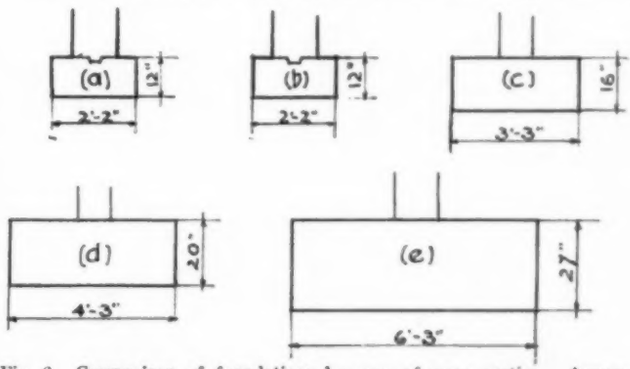


Fig. 2. Comparison of foundations by area of cross section. Assuming the same conditions for all cases, (a) shows wall footing of a two-story building, (b) of a four-story building, (c) column footing of a two-story building, (d) column footing of a four-story building, (e) column footing of a ten-story building.

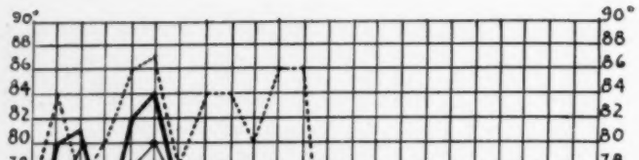


Fig. 3. Temperature fluctuations under the ceiling in a building artificially insulated compared with temperature in similar position in a building insulated by an air space.

wooden roof, obviously the roof must be removed if the new story is to be as fireproof as the stories below. To provide circulation space for pipes and insulation against heat and cold, it has been the custom to create an air space from three to six feet between the roof and ceiling. This ceiling is hung from the roof structure, so that when the roof is removed, the ceiling must fall with it. This means that the patients on the top floor must be moved during the process of construction, and also that the fixed equipment on the top floor remains exposed to dirt and possible injury during construction.

The air space above referred to is not always necessary. If it is meant to serve as an insulator, attention is called to the fact that in recent years insulators have been put on the market, that with one or one and a half inches accomplish the work of a three foot air space. The writer, not satisfied with laboratory results claimed by manufacturers of insulators, satisfied himself by tests on actual hospital buildings, that two half-inch layers of a comparatively cheap insulating material in one building did the work of a three-foot air space in an adjoining building.

As a pipe circulation space, the air space referred to above is often justified. To run the circulating pipes exposed in the basement means unsightly basement rooms. This objection can be overcome by running the pipes in a trench under the basement floor, but where rock is encountered, or where the pipe trench is below the water level of the boiler, it may be more practical to resort to the air space which may be immediately under the roof or in the middle of the building. In any case, the top of the air space should be a flat fireproof slab to permit the addition of new stories without the destruction of existing work.

The foregoing discussion leads to the conclusion that it is perfectly possible to begin a hospital building with an economical floor unit repeated a sufficient number of times to take care of the immediate needs, and to make the footings and columns heavy enough to take as many additional stories as the future requirements may indicate.

Finally, the question may be asked, how high is it practical to develop a hospital building? In many communities the maximum height of buildings is laid down by law, and the law varies with every community.

Then, again, as mentioned above, there is what may be termed "the saturation point" or a height beyond which it is not economical to build. This consideration, however, affects commercial buildings more than it does hospitals, as we have no hospitals high enough to reach "the saturation point." It must be said, however, that there can be no question from the point of view of function that vertical circulation is more convenient and economical than horizontal circulation. When traveling in a horizontal plane, one usually does it on his feet, also he encounters persons moving in an opposite direction. But traveling in a vertical direction is done by the elevator, which is swift, and the path is unobstructed.

Taking the country as a whole, we still seem to think in terms of the pavilion. There is a certain timidity and negative reaction toward high hospital buildings. This reaction is slowly being overcome, or at least it is not questioned in the larger cities. We have several examples illustrating the practicability of high hospital building. The Fifth Avenue Hospital of New York is nine stories high, the new hospital at the Mayo Foun-

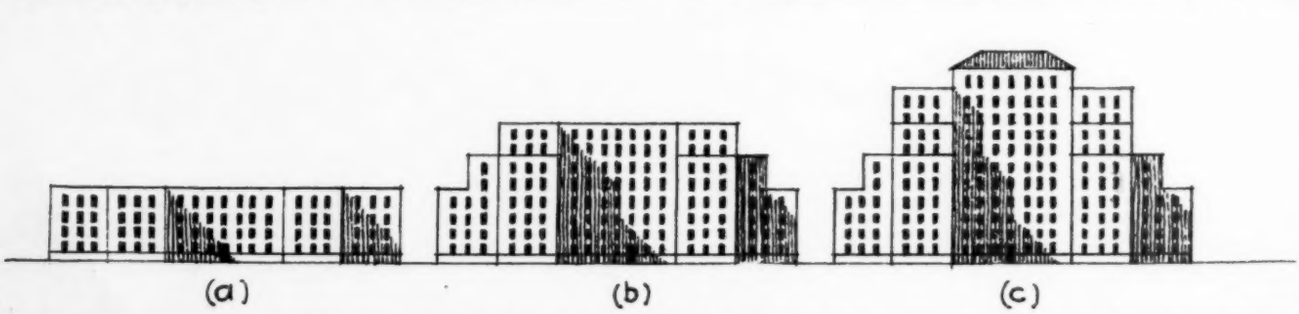


Fig. 4. Progressive stages of vertical expansion. The basic plan of the figure is as shown in Fig. 1 (c). (a) four-story stage of development; (b) eight-story stage and (c) final stage of development.

dation, Rochester, Minn., is a sixteen-story structure, and the Allegheny General Hospital, Pittsburgh, is to be fifteen stories in the main body of the building and seventeen in the central portion.

The writer does not wish to be understood as advocating skyscraper hospitals. The real emphasis must be placed on the fact that it is more economical to build a building of sufficient stories to take care of the present needs and make physical provisions to receive future stories than it is to add separate buildings to increase the bed capacity of the hospital.

Objection may be raised to the above procedure that a hospital half built will not have a good appearance. The answer is that by a little study it is possible to make the initial installment of a building appear self-contained, and it is possible to reconcile the future installments with the previous ones in the same manner that architects often do when called upon to add new stories to existing buildings. Further attention may be called to the cathedrals of Europe that sometimes took centuries to develop.

Finally, there is the argument that when a hospital building has served a quarter of a century, it has outlived its usefulness and should be demolished rather than expanded. This contention is granted in the case of poorly constructed buildings and at the same time it is an argument against cheap construction. Most buildings well constructed can be adapted to modern use. The Bullfinch building of the Massachusetts General Hospital, Boston, one of the oldest hospital building in this country, is still made good use of, and what shall we say of St. Bartholomews in London, where the oldest buildings are still used today for hospital purposes?

VETERANS' BUREAU PUBLISHES ANNUAL REPORT

The annual report of the director of the U. S. Veterans' Bureau shows that on June 30, 1926, there were 24,915 cases, which was within 3,200 of the total number of patients in all hospitals just prior to the passage of the act of 1924. The patients were classified as follows: neuropsychiatric, 12,200; tuberculosis, 7,308; general, medical and surgical, 5,387. Twenty per cent of the total number of these patients was receiving hospitalization for non-service disabilities.

Altogether more than 500,000 beneficiaries of the bureau have been admitted to the various hospitals since September, 1919. The largest number of admissions, which was during 1922, was 134,354, and during the two following years there was a material decrease and a 20 per cent increase in 1925 as a result of the provisions of the World War Veterans' Act of 1924.

Of the total number of patients discharged from all hospitals (70,898), 55 per cent were improved to some extent by hospitalization. Among the 19,131 tuberculous patients discharged, the disease had been arrested in 650 cases and apparently arrested in 433 cases. The number of neuropsychiatric patients discharged during the year did not equal the number received, resulting in the accumulative load of patients with a chronic deteriorating type of insanity.

One of the most significant accomplishments of the year, according to the report, was the reduction in discharge after hospitalization for observation, special examination and adjunct treatment. The total number of deaths was 3,412.

MUSICAL ENTERTAINMENTS AS THERAPEUTIC AGENTS

Over ten thousand musical entertainments were given in the hospitals of this country during 1926, according to the report recently issued by the National Association for Music in Hospitals. Over one thousand of these took place in New York City. The report states that approximately five million hospital patients benefited through the organization in its first year and more than one hundred hospitals have officially recognized the fact that music may be used successfully as a therapeutic agent. Twenty-three hospitals in New York and vicinity were visited by singers and other musicians during the year.

HOW MANY EMPLOYEES SHOULD THERE BE PER PATIENT?

"Efficient administration is rendered difficult in many hospitals because of the rapid labor turnover. As a rule, we do not pay as good wages in hospitals as are paid elsewhere. This is due to three reasons: First, a false sense of economy in lower wages; second, the eleemosynary traditions of the hospitals, and third, the caliber of people who seek employment.

"Exclusive of physicians and inclusive of nurses it takes on the average about two employees per patient. The amount of nursing required per patient in a hospital has been studied in more minute detail than for other services. On a basis of a study of selected cases in ten hospitals in New York it was found that it takes five hours and five minutes to do the necessary nursing of an average patient in twenty-four hours. The longest time requirement is in the nursing of children. The average for adult surgical patients is four hours and thirty-nine minutes and for adult medical patients four hours and fifty-seven minutes in every twenty-four hours.

"As a rule, nurses in hospitals work in two shifts, the day shift of eleven hours and the night shift of thirteen hours with two hours off for meals during which time there are substitute nurses. At present there is a tendency to introduce the three shift system of eight hours' duration but it has not as yet found general introduction."—E. H. Lewinski-Corwin, Ph.D.

TORONTO'S NEW AMBULANCE SERVICE

A new development in ambulances is now at the disposal of the physicians of Toronto, Ont. The chassis is on a long wheel base so that the stretcher can be placed in the ambulance either through a side or rear door. The patient is carried on a special cot fitted with a hood so that the face is shielded from the public and can be completely covered when weather conditions demand. The interior of the ambulance is equipped with running water. It has two attendants and can be procured at any hour.

HOW MUCH STANDARDIZATION IS NEEDED IN THE SMALL HOSPITAL?*

By the Rev. M. P. Bourke, Superintendent, Catholic Hospitals of the Diocese of Detroit; St. Joseph's Mercy Hospital,
Ann Arbor, Mich.

STANDARDIZATION and equipment of the small hospital involve, I think, but one question, and that a tremendously important one. Is or is not life as precious a blessing in the rural village and the small hospital as it is in the great cosmopolitan center and the larger theater of medical and surgical activity? To that question there is only one answer. Life is God's noblest and most precious natural gift to man, and it matters not whether that man be king on the throne or beggar in the hovel. Where life is concerned we stand on a common level. There is no aristocracy or existence, no favored few to whom may be assigned special privileges in the matter of the right to existence or non-existence. Such being the case, the problems of the small hospital, when its right to existence under our modern day conditions is questioned, become matters that are daily growing more important.

Reasonable Demands

FATHER Bourke presents a definite idea of what standardization means and why the small as well as the large hospital should meet the minimum requirements. He summarizes the essentials in the standardization program with respect to staff organization, case records and the laboratory and shows that these important factors of service are just as fundamental to the small as to the large institution. The minimum facilities needed by the small hospital are outlined by Father Bourke.

Let me summarize briefly what I propose to discuss: 1. What is a small hospital? 2. What is the meaning of standardization as applied to hospitals? 3. How far is the program of standardization applicable to the so-called small hospital in matters of record, equipment, staff organization and control, and the conduct of the hospital in general?

I am going to dismiss the first inquiry with the arbitrary statement that a small hospital may be regarded as a hospital of twenty-five beds or less. As to the second, I think we may define standardization as the process whereby the hospitals of the country are elevated uniformly to such a level as will insure the best possible care of the patient, commensurate with all the reasonable requirements for hospitals of the class in which the patient is confined. What are these requirements in general? The answer calls up our third general inquiry, the essence of the subject at hand.

Many answers are given, but every program seems to put forward a few particulars as fundamental. The first of these is a staff of physicians and surgeons, competent, ethical and honest, prepared to work in harmony for the good of every patient in the institution; a staff that will put humanity above lucre, and work as a unit in active consultation; a staff that will meet at reasonable intervals to discuss the results of cases discharged, and the needs of patients under treatment.

Now let me ask in fairness what is there about that requirement that can be demanded of the large institutions, and from which the smaller hospitals can be absolved? Absolutely nothing. Every hospital, large or small, should have a staff. It may be closed or open or controlled, but a working organization is absolutely essential. I incline to the controlled staff system, because I cannot close my eyes to the fact that there are many men entitled by law to subscribe themselves doctors of medicine to whom I would not dream of entrusting my life or the life of anyone near and dear to me.

Every hospital great or small should have an organized staff and no man should be a member of that staff who is too great to consult with his competent fellow members upon any issue that is in the leastwise baffling to him. To fail in this duty on account of jealousy, brands the misdoer as an unethical monster; to neglect this duty on account of ignorance, stamps him as a worthless incompetent, and competition is too keen today to waste life and time with either of them. I am a firm believer in the doctrine that two heads are better than one, and I think any staff, by

*Read before the meeting of the Michigan Hospital Association, held at Ann Arbor, January 11, 1927.

patience and tact, can be brought to adopt the practice of group diagnosis and reciprocal consultation.

A periodic staff meeting should be held by every hospital in the land, the oftener the better. By this I do not mean a purely business meeting, as is unfortunately the vogue, but a clinical gathering to discuss the treatments, death and morbidity of their cases. When a case is not improving and the summary card discloses this fact, the method of treatment employed should be scrutinized, and suggestions for betterment solicited from all. A little earnest rivalry is a healthy thing, and the physician or surgeon who cannot defend his position and submit to reasonable criticism is hardly a valuable asset to the profession. We can all learn from others, despite our years and experience, and I believe that the staff meeting of the standardized hospital is a boon inestimable, especially to the young man. The clinical experience of his seniors in medicine, surgery and obstetrics, based upon the record of cases that have actually come under his observation in a hospital, constitute an aid to the junior that nothing else can supplant.

Every hospital, great or small, should have its rules, regulations and policies specifically outlined in writing, wherever such a method is feasible. By this I do not mean the unending accumulation of rules and regulations found in many hospitals, since written regulations concerning every tiny detail breed unending conflict at the hands of the critical staff member. Too much law is always worse than none at all. However, a common sense classification of indispensable rules, with sensible elasticity, to make allowance for the inevitable, reasonable exception is needed for order, harmony and a better general understanding. You may tell me, perhaps, that I am talking more of standardizing the profession than the small hospital, but I tell you in turn that the one without the other is a ridiculous misnomer.

Standardization of Case Records

The second generally accepted feature of standardization relates to case records. The old-time practitioner always made his notes, and these today have developed into the case records that have done so much for medicine. When I speak of case records I mean an accurate and complete written and readily accessible record of every patient in a hospital, including personal history, physical examination, diagnosis (preoperative and postoperative, when surgical), together with treatment, x-ray findings, pathological report, condition on discharge, and finally, where available, discoveries on autopsy. What is there in this, from which the small hospital may lawfully exempt itself? I am inclined to measure the value of hospital work by its written records. The standing of every member of the staff is written in characters easily decipherable on his case records. I know of nothing harder to do than to induce the average physician to keep good records, yet every physician stands or falls by his records.

Whenever I wish to check up on the status of any physician I hurriedly scan his records for a year. If details of diagnosis, essential physical findings, proper historical data be lacking; or if his records indict him with continued practices that evidence lack of attention to duty, or the performance of questionable work, in my mind that man has written his own professional obituary.

Not Less Responsibility

What is true of the larger hospital is true a thousandfold of the smaller one, for there the greater opportunity growing out of the smaller number of cases handled makes slipshod methods and imperfect work more strikingly apparent. If our larger institutions are required to make a creditable showing in this respect, how much more reasonable it is to expect more of centers where this can be made with greater facility. Any hospital can send a nurse or record keeper to one of a thousand record rooms in the land, where she can acquire in a month sufficient information to make and demand of others satisfactory records.

I have often wondered why the physician cannot see in well kept records an invaluable defense in an hour of trial. A certain percentage of patients die, many fail to show improvement under the most skilled attention, and out of these inevitable circumstances arise daily suits for malpractice. In the hour of that ordeal the physician's most important witness is his written record of the case. I have often thought, as I reviewed the records of some cases, that if I were a lawyer engaged in a legal contest against the physician who was responsible for them, his only hope of escaping loss would lie in the fact that he was proof against judgment.

What records, you may ask, are indispensable for the small hospital? Some, such as in obstetrical cases, are absolutely fixed by the law. Outside these, only enough forms should be employed to enable the hospital to keep a perfect check upon every essential, since too many forms, like too many laws, are both cumbersome and impractical. A general history guide sheet with a questionnaire for complete physical examination, though not absolutely essential, is a splendid help to the physician. But a history sheet, showing

family history and complete physical examination should never be dispensed with. The entry slip with physician's orders, bedside chart, laboratory sheet, operating room record, x-ray record, summary card, blanks for refer, transfer, progress notes and condition on discharge, are likewise indispensable. These, in my judgment, constitute a fair and necessary minimum for the smallest hospital in the land.

Standardization of the Laboratory

The third and last item in every program of standardization has reference to the hospital laboratory. The advances growing out of modern research in this matter are marvelous. Today we know what formerly was not even conjectured. Precautions are possible as a result of laboratory findings that have robbed surgery of most of its terrors and that prevent at every hour of the day those terrible after-complications that were formerly the occasion of every hospital's highest mortality. By the use of chemical, bacteriological, serological, and x-ray aids to diagnosis, the modern physician has an incomparable advantage over his predecessors.

To what extent are these devices applicable to the smaller hospital? I am not demanding too much, I think, when I require of every small hospital the minimum equipment to which I shall refer. Every hospital should have the facilities for making certain analyses of urine, blood, feces, and sputum. It is no imposition upon the small hospital to demand equipment for chemical and microscopical urinalyses and for the quantitative analyses of sugar and albumen. The small hospital should be prepared to make coagulation tests of blood, in anticipation of hemophilia; to make blood counts showing reds and whites and differentials; to make blood ureas and take blood hemoglobins. It should be prepared to make an examination of feces, at least as a test for the presence of internal hemorrhage; and of sputum as a test for evidence of tuberculosis. I am not, you will note, demanding extensive and expensive equipment.

All of these tests require no expensive outlay and demand the presence of no laboratory expert. Any technician can, in a few weeks, obtain sufficient familiarity with all of these processes to give to the patient that guaranty of protection that he has a right to demand of any institution dignified with the title of hospital. A few reagents are essential, and with their content the laboratory director need not even have complete familiarity.

Those processes that are more intricate and call for expert knowledge can usually await the findings of the commercial laboratories with which the country is well supplied, or the state laboratories that are open to everyone. It would not be fair to demand of the smaller hospital, as a requisite for standardization, the presence of equipment or the employment of an expert to make blood nitrogens, blood cultures, cystoscopic examinations, Widal tests; or to examine tissues and do bacteriological work.

It was my belief at one time that reactions for the detection of syphilis, considering the equipment required and the expert help needed for accuracy, could not in fairness be demanded of the small hospital. But the complicated Wassermann reaction is gradually giving way to the less expensive, less intricate, and apparently equally accurate Kahn test. Skilled laboratory workers are satisfied today that in the three or four "plus" cases, the Kahn test can disclose with certainty all that the Wassermann test discloses. Both of these tests are being used simultaneously on the same cases and in the same laboratories. If this check discloses, as it probably will, that both reactions are equally effective, the Kahn test will have to be added to the required laboratory repertoire of the small hospital.

Minimum Equipment

As to the equipment of the smaller hospital, I must not enter into it in detail. Let me merely indicate a few of the things I deem important. I think every small hospital should have some form of x-ray apparatus; that its operating room should be prepared of such material as may easily and frequently be washed with lysol or some carbolized solution; that it should have a reasonable supply of instruments with facilities for their sterilization, fractionally or otherwise; that it should never be without a supply of sterile gauze and sterile gloves, and a tank of oxygen to meet an emergency, and that it should keep constantly on hand solutions to enable the surgeon to make all aseptic preparation for speedy and clean work.

Many other things might be enumerated, but I trust that I have indicated the essentials. Without these, if it were in my power, I would permit no hospital, great or small, to open its doors to the public. With them reasonable precaution is employed to safeguard human life, and that should be the hospital's greatest concern. I should insist at least on the minimum equipment, on reasonably high grade work, on suitable and sufficient records so that I should be able to demonstrate the thesis with which I started, that human life, God's most precious gift, is as sacredly safeguarded in the rural hospital as it is in the great cosmopolitan center of medicine.

A Unique Achievement —Syracuse Memorial Hospital

By Dwight Folsom, Hospital Financier, and Dwight James Baum, Architect, New York.

The entrance is made inviting by the dignity and simplicity of the colonial architecture.

FIVE years of skillful planning and financing have resulted in the realization of the new Syracuse Memorial Hospital, an unusual development in modern hospitalization. The aim has been to provide in the hospital a teaching and research center for Syracuse University Medical School and a health center for Onondaga County and upstate New York. The new hospital is to be the first general hospital unit in the medical center for Syracuse University. Other units under consideration at the present time are a city hospital for communicable diseases and a state psychiatric hospital. The new hospital has fulfilled its purposes to such a degree that it holds almost a unique place among teaching hospitals.

At the outset the project called for a 300-bed hospital and nurses' home entailing an expenditure of two and one-half million dollars, and this sum has been realized in the campaign recently conducted. The almost unprecedented success of the campaign and the wholehearted support of the people of the vicinity have been due largely to the campaign organization and the cooperation of the board of trustees, which is composed entirely of women, and the various committees who assisted.

Practically four months were devoted to the preparation and completion of the campaign, the intensive period of which required eleven days. More than 11,000 subscriptions were obtained by the 1,300 men and women who composed the

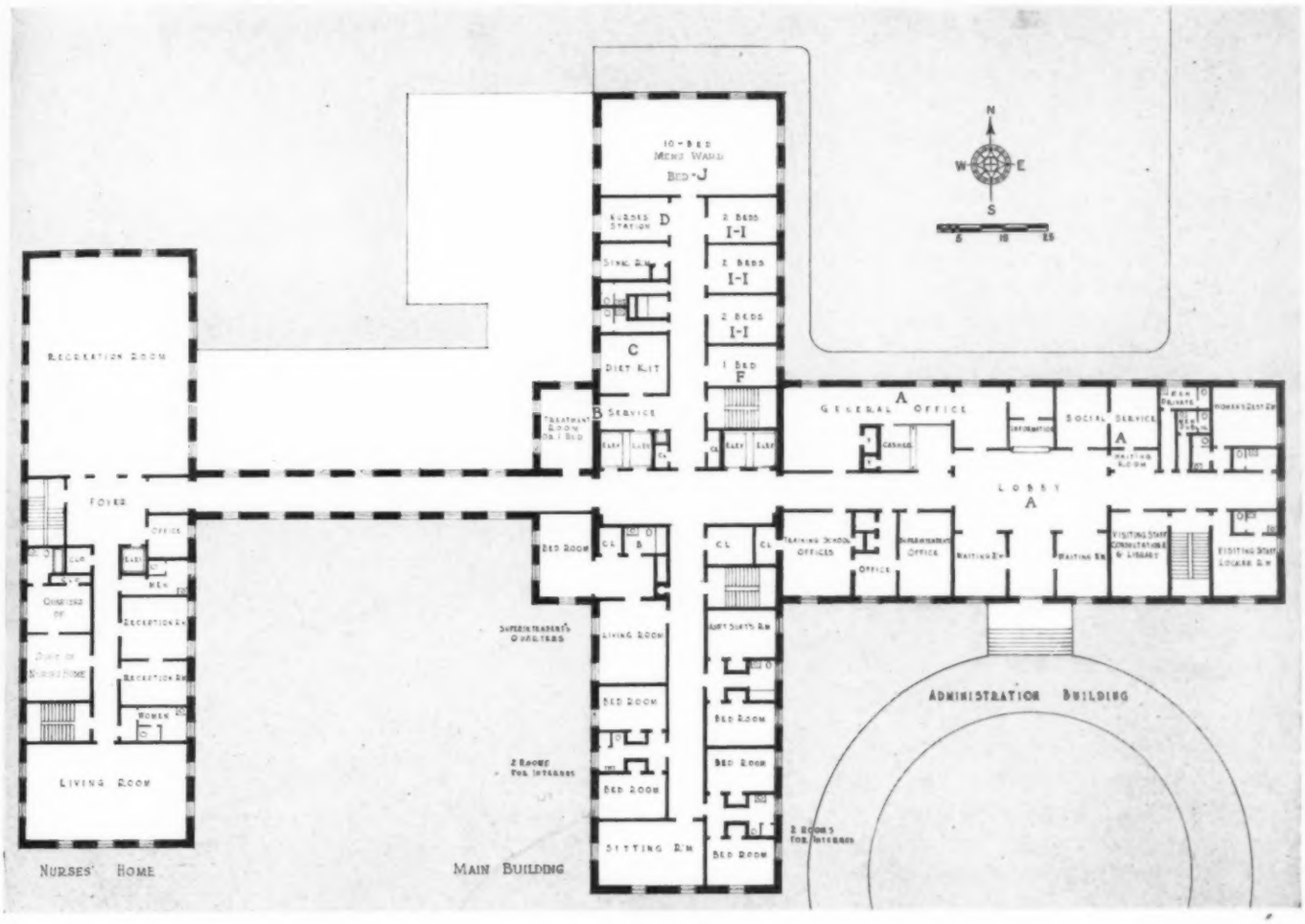
teams and committees as volunteer workers. The total sum reached at the closing dinner, which was attended by 1,100 people, was $2,341,000, or a comparatively small deficit under the $2,500,000 which had been set as the objective of the campaign, and assurance was given that the remainder would be received through additional subscriptions.

One of the interesting features of the campaign, to which a large part of the success was ascribed, was the memorial form of subscription, under which donors of $1,800 or more selected definite units of the building, such as ward beds, private rooms and laboratories, and made their gifts equal to the cost of these units. Approximately 170 memorial subscriptions were received, ranging from $1,800 as the minimum to $200,000, which was given by one family for several floors of the nurses' home. The unusually large objective called for large gifts, and the hospital received these, in addition to the $200,000 gift, one in each of the following denominations: $90,000, $75,000, $54,000, $52,000; and four of $50,000, with others becoming more numerous as the amounts decreased down to those who pledged a few dollars to be paid on the installment plan. All memorial subscriptions as well as general contributions are payable in six equal semi-annual installments over a period of nearly three years, and every dollar received is to be used for hospital purposes, the campaign outlays being furnished by the board of trustees. The nurses in training at the hospital gave loyal support to the campaign to the extent of raising $12,000 from their members and graduates of the training school.

The campaign has set a precedent for community projects in the city of Syracuse and has given assurance of the interest and support of the people of the surrounding towns and villages whose contributions made the venture successful.

Exceptional care and skill have been applied to the development of the design of the hospital, in order that it may meet all the requirements of the teaching hospital and community health center in the most efficient and economical way. To this end the building committee, the architects, the various officials of the hospital and Dr. S. S. Goldwater, New York, who was retained as consultant, worked four months to make adequate provision for the various services and at the same time keep down the cost of construction. This was finally achieved with a ratio of less than 8,000 cubic feet of construction per bed, including the nurses' home, a saving of from two thousand to

The large lobby is charming and home like in its colonial setting and treatment.



Plan of main floor.

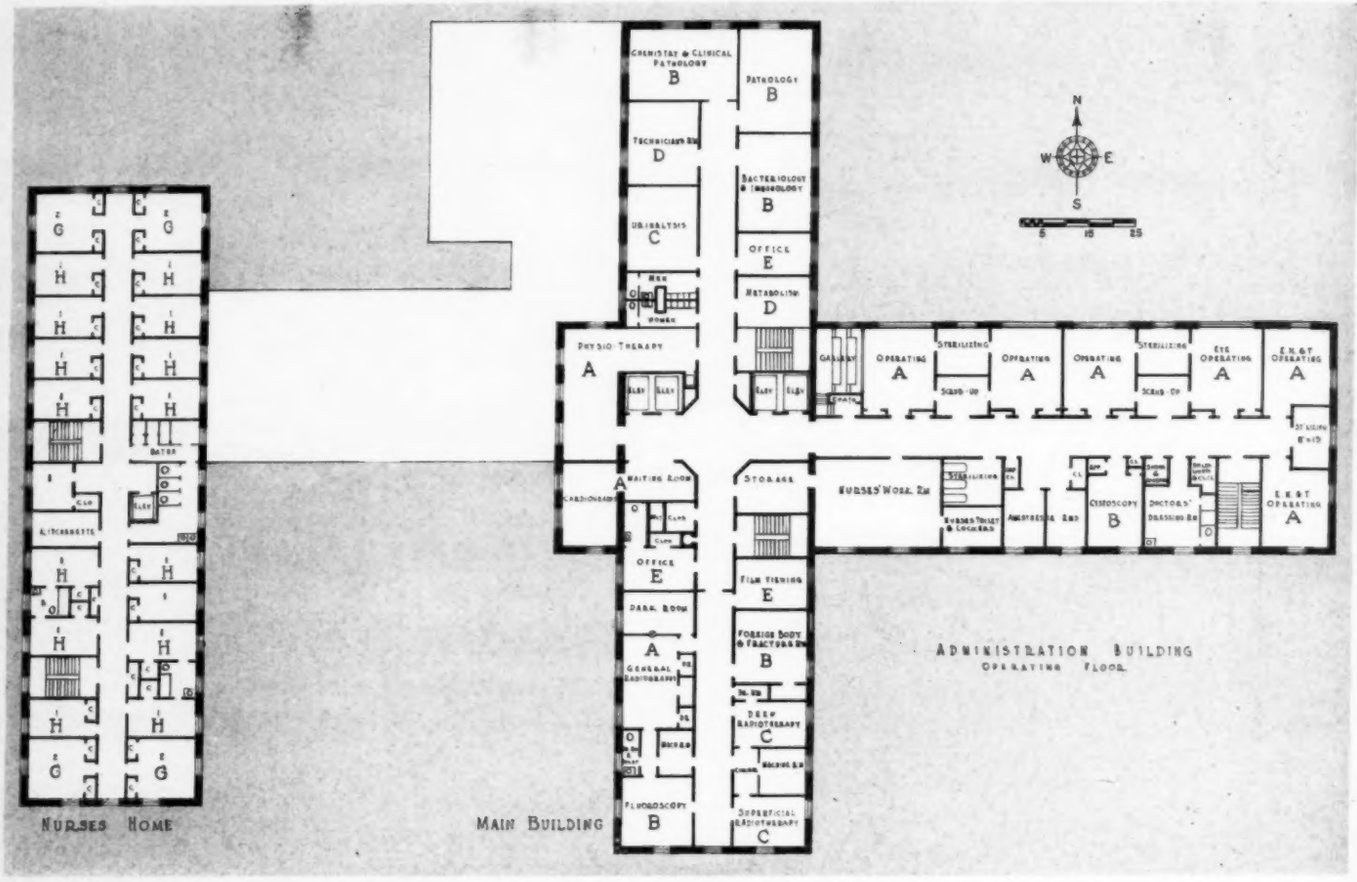
four thousand cubic feet per bed over the usual space requirements. A great deal of consideration was also given to minimizing operating costs by planning for maximum flexibility of service and economy of maintenance.

The unusual features of the design of the hospital and its advantages of location have combined to make it outstanding from the standpoint of beauty as well as of service. As expressed by Dr. Goldwater, "the hospital represents a distinct departure in plan from any hospital that has been erected in the State of New York, and it is believed that it will serve as a model for many hospitals to be erected in the future." The institution consists of three principal units: The main ten-story building containing all patients' rooms and wards; the three-story administration and operating wing, and the seven-story nurses' home. The nurses' home is joined to the main building by a connecting corridor on the first floor and by a service wing on the basement and sub-basement floors.

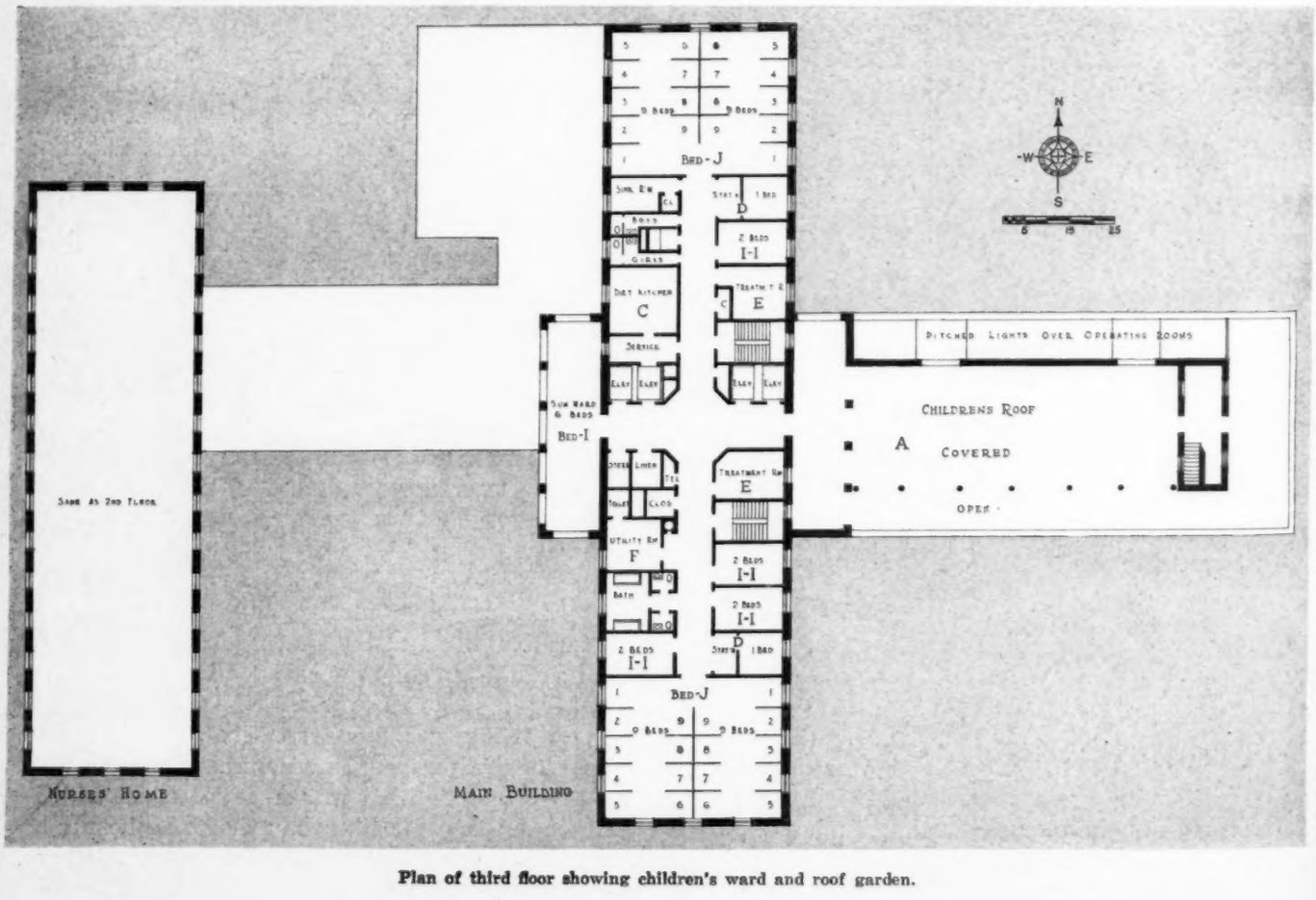
The hospital has a capacity of 297 beds, including forty-nine bassinets. Of this number 125 beds are for ward patients, seventy for semi-private and fifty-three for private patients. Most of the ward beds are in small units which can readily be converted into semi-private rooms. The nurses' home will accommodate 143 nurses.

The unusual setting of the hospital has added much to its attractiveness. It is situated on an abrupt hillside overlooking the city and Onondaga Lake beyond, and this location makes possible two approaches. The service and ambulance entrance is approached at a sub-basement and basement level from a lower street in the rear, while the front approach to the administrative building is on the level across part of the future grounds of the Syracuse University College of Medicine.

The style of architecture is the Georgian colonial and the building is of red New England brick trimmed with white marble and artificial stone. The architecture and the setting do much toward lending that homelike appearance that is difficult to attain in large hospitals. The approach and exterior of the buildings are entirely devoid of an institutional aspect and the administration building gives more the appearance of a dignified country residence or club than that of a hospital. The tower on the main building is of a design



Plan of second floor showing diagnostic, therapeutic and operating departments.



Plan of third floor showing children's ward and roof garden.

similar to that of Independence Hall.' The administration building extends east and west and the larger buildings north and south. The approach to the main entrance is by a circular entrance drive.

As will be noted from the accompanying illustration, the homelike atmosphere that characterizes the main entrance is also apparent in the arrangement and furnishings of the main lobby which has the quiet dignity and charm of the Colonial setting.

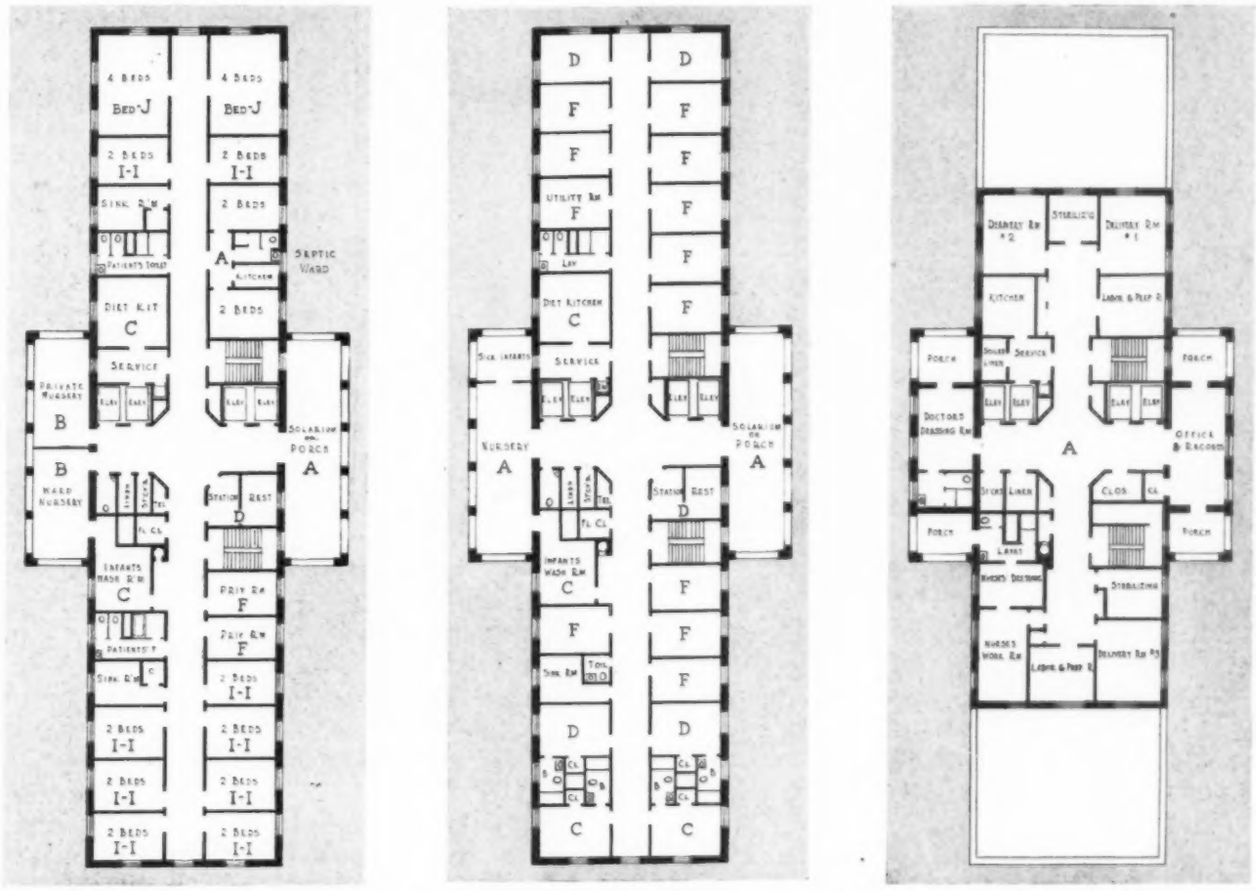
At the south end of the lobby are two waiting rooms. This floor of the administrative wing also contains the usual general and administrative offices, visiting staff rooms and rest rooms and two large rooms for the social service department.

An unusual arrangement has been achieved in locating the surgical department on the second floor of the administration wing. It is placed in the top of this section of the hospital at right angles to the main building, which arrangement makes it possible to provide sunken inclined windows on the north of the operating room, affording the same daylight illumination that would be had at the top of the main building. The proximity of this department to the main entrance is also of distinct advantage in many ways.

The surgical department has six operating rooms, including one for eye, ear, nose and throat work. The sterilizers are in a separate room adjoining the nurses' workroom. Opposite this department in the main building are the x-ray rooms and laboratories together with diagnostic facilities, so that the entire operating and diagnostic facilities are centered on this floor, and the surgical department constitutes a terminal unit quite separate from the other departments.

The roof of the operating department has also provided an ideal roof garden and playground for the convalescent children, since it is on the same level with the children's wards which are on the third floor of the main building. This space, partly open and partly enclosed, provides one hundred feet of southern exposure for the roof garden.

Instead of the solariums being located at the ends of the building, as it is the usual arrangement, they are placed on the two sides of the main building, which is long and narrow. In this way the two corner rooms at the end of the building are not cut off from light as they would be if the porches were placed at the ends of the building.



Left, eighth floor for ward and semi-private patients; center, ninth floor for private rooms; right, tenth floor for the obstetrical department. The three floors will be entirely set aside for maternity patients.

The solariums are fifty feet long and twelve feet wide and extend in a column up each side of the building. Those on one side of the building will be used as semi-private wards for convalescent patients for which they are admirably fitted, since their location on the east and west sides of the building provides for both morning and afternoon sunlight. Their location also makes it possible for one floor nurse to have direct control of the solariums from the floor desk.

Three floors at the top of the building have been set aside for the maternity department. This location insures a maximum of quiet, since it is removed from the other services, and, in turn, it will not be a source of disturbance to the patients in other departments of the building. The delivery rooms have been placed on the tenth floor at the top of the building, while the ninth floor is devoted to private rooms and the eighth to ward and semi-private rooms. This floor also contains an isolated septic ward. The crêche for sick infants is located in the nursery on the ninth floor.

The fourth floor has been set aside for the women's ward and semi-private rooms. The wards range from two to ten beds and the women's section, like the other ward sections, contains its separate treatment and examining rooms as well as the sun ward on the west and solarium on the east.

Two Floors for Children

The third and fifth floors are given over to the children's department, the fifth being composed of private rooms and the third of two large wards which are divided into separate cubicles.

The sixth floor has been set aside for semi-private patients, the accommodations on this floor being principally two-bed rooms. The seventh floor is planned solely for private patients and it provides rooms with and without baths.

The service rooms on each floor include an alcove for the stretcher, large linen closet and other closets, telephone, utility room, soiled linen chute and a diet kitchen which is entered through a service alcove so that noise and odor will be less likely to reach patients.

A ten-bed men's ward is located on the first floor of the main building which also contains several two-bed separation rooms.

The main kitchen and accessory rooms are located in the basement at the back of the main building. The administrative section of the basement contains the emergency department, record rooms, pharmacy, morgue and clinic rooms. A small self-contained ward provides isolation for contagious cases, until they can be removed to the communicable disease hospital.

The west wing of the building contains the nurses' dining rooms, lecture rooms and library.

The laundry is housed in the sub-basement of the main building, the remainder of the floor being given over to storerooms, and the south wing, which is the sub-basement of the nurses' home, contains the dining rooms and living quarters for the domestic help.

HOW CANADIAN HOSPITALS ARE DISTRIBUTED

General hospitals in the Dominion of Canada now number 676, exclusive of those for mental patients or sanitariums for tuberculosis patients, according to the recent report issued by the Canadian Department of the Interior. Of this number 388 are public hospitals, 259 private and twenty-nine Red Cross Hospitals.

The public hospitals are by far the largest units. They average a little more than 66 beds per hospital; private hospitals average 8½ beds each and Red Cross hospitals five beds each. Grouping all hospitals together, the following table shows the number of hospitals and number of beds in each Province:

Province	Hospitals	Beds
Nova Scotia	29	1,313
New Brunswick	20	933
Prince Edward Island	3	185
Quebec	48	4,012
Ontario	176	9,955
Manitoba	46	2,872
Saskatchewan	115	2,247
Alberta	132	2,871
British Columbia	101	3,587
Yukon	3	72
Northwest Territories	3	29
Total	676	28,076

SOME METHODS FOR SOLVING THE NURSING PROBLEM

A survey of the nursing situation together with some suggested solutions were presented by the nursing committee of the Tri-State Medical Conference at its recent meeting held at Atlantic City, N. J. Among the suggestions offered for the solution of the problem was a basic simplified course of training of shorter duration, with provision for advanced training and training for special service.

Group and hourly nursing were advocated, with shorter hours and larger remuneration to nurses and lessened cost to patients. The committee also expressed itself in favor of intensive effort to develop properly and adequately training and use of other than most highly qualified nurses. Multiplication of professionally controlled non-commercial central agencies was also suggested.

Among its observations the committee points out that the only source of nurses is young women who will voluntarily take up the work because it offers an attractive career or return in comparison with other opportunities. It also states that so long as there is no rapid fall in present-day money standards the prospect of securing any large supply of nurses of minimum acceptable personality, education and training at sufficient reduction from present rates of pay is nil, under present conditions.

HOW LONG DOES THE GRADUATE NURSE REMAIN PROFESSIONALLY ACTIVE?

FROM one of the hospitals of the country comes the report that 57 per cent of all the graduates of the nurses' training school get married or retire sometime after they have received their diplomas. From another hospital comes the report that only 6 per cent of its nurses have married after graduation and that 72 per cent are still employed in institutions.

Why this great difference in percentages? Which condition is healthy? What is the remedy for the one that is faulty? These are questions that remain unanswered, but the discussion of them seems pertinent at this time because of the prominence being given to the subject of nurses' training, the difficulty of procuring student nurses and the grading of nursing schools.

A preliminary study of ten training schools in the United States and Canada, made in the late summer, showed that 38 per cent of the graduates were either married or retired, that 5 per cent were dead, that 27 per cent were doing private duty nursing, that 14 per cent were still in institutions in some capacity, that 7 per cent were doing public health nursing, which included school visiting, industrial and other public health work, and that 9 per cent had abandoned nursing and other health activities and had entered other professions.

While these general classifications are interesting, it must be admitted that they are not altogether accurate. "Retired" may mean almost anything. It may indicate that the former nurse is now in another profession; that she is ill; that she is too old for further active duty; in some hospitals it may not be known exactly what she is doing, and instead of classifying her status as "unknown" it is thought best to classify her as married or retired. However, where questionnaires have been answered and percentages given separately, and where it appears that an accurate check is kept upon the alumnae, the actual percentage of those retired never exceeds 5 per cent and often is much less, so that on a general average it is safe to assume for all practical purposes that the proportion who get married is approximately 33 per cent of all the graduate nurses.

Following this preliminary study of ten training schools much interest was shown in the subject by nurse educators and other persons who are working toward the betterment of the nursing profession. Accordingly a questionnaire was prepared and sent out to a limited number of hospital training schools. The questionnaire was made as simple as possible and included only six questions on the following points: The percentages of those who were married or retired; those dead, those in private duty nursing, those still in institutions, those doing public health work and those in other professions.

No especial type of hospital training school was selected for this study, as some of the schools have been in existence for many years and others for only a few years. Indeed some of the hospitals wrote that they had yet to graduate their first class of nurses. The size of the hospital did not matter, as a cross section of the training schools, rather than an exhaustive study of the nurse graduate, was wanted. This article therefore is based, to a great extent, upon approximations and has been prepared solely as a possible preliminary study for further research and not as a final analysis of the situation.

Keeping in mind the percentages that were found in the study of ten hospitals, it is interest-

What the Returns Show

IN AN effort to learn what percentage of the nurses graduated from hospital training schools remain in the profession and in what classifications they serve as well as the percentage that leaves the profession, an intensive study of the situation in this country was made by THE MODERN HOSPITAL.

This article is based on the study made of seventy-two hospital training schools answering the questionnaire, the results of which show the following percentages of graduate nurses according to occupation: Married or retired, 38.80; dead, 4.81; private duty nursing, 30.98; institutional, 12.64; public health nursing, 6.70; and other activities, 4.26.

While this study is not presented as a final analysis of the situation, the percentages obtained give an accurate cross section of graduate nurse distribution.

ing to note that a study of 72 hospital training schools brings forth the following percentages:

Married or retired	38.80
Dead	4.81
Private duty nursing	30.98
Institutional	12.64
Public health nursing	6.70
Other activities	4.26

Further studies on this subject will doubtless change these percentages but little, and it is not probable that absolute accuracy would change them materially.

The highest precentage of those who were married or retired was 57 per cent and in the hospital showing this percentage 5½ per cent were in other lines of work. After 4 per cent is allowed for those who have died it leaves only 33½ per cent still in some form of health work, and of these only 7 per cent were in institutional work. In other words, for every hundred nurses who graduated from this training school there was an economic loss, as far as the health of the community was concerned, of 66½ women, leaving only one-third available for the duties for which they had prepared themselves. The report of the training school under consideration, including the last graduating class, showed that 20 per cent of the graduates were in private duty nursing. While this is purely surmise, it may be assumed that of this 20 per cent, at least 7 or 8 per cent, were from the graduating class and that 2 or 3 per cent who were listed in institutions were from the graduating class. This would further lower the percentage in nursing work.

Among the seventy-two hospitals studied the lowest percentage of those married or retired was 6 per cent. But this figure came from a Catholic hospital in a small community in the mid-southwest, so that it is not really a fair basis of comparison. It was not included in the list from which the percentages were drawn. This same institution shows 72 per cent still in institutional work, which is unusual.

It is interesting, however, to analyze some of the replies that have been received. There is a training school in New England that has graduated 879 nurses since its first class. Of this number 816 are women and sixty-three are men. When making comparisons or getting percentages, it would have been obviously unfair to include the men with the women graduates, because here we have an unusual condition. Therefore, no account was taken of the men. Of the sixty-three men who have graduated forty-one are still nurses, three are dead, nine are physicians and eight are in other professions, such as salesmen, lawyers and clerks. This does not present an unusual situation, when fifty out of sixty-three are still in nursing or health work, as is indicated by the report. It may or may not be an argument for the male nurse and, before coming to a definite decision, it would be better to study further the efficiency of these forty-one nurses.

Of the 816 female nurses graduated from the school more than 40 per cent were married, more than 41 per cent were private duty nurses, only 7 per cent were still in institutions and less than 6 per cent were in public health work. It should be explained that this training school is well known in New York and New England for its excellent training and for its graduates who are well equipped for private duty work.

A rather surprising situation exists in a midwest training school which shows only 17 per cent married, 44 per cent private duty nurses and 33 per cent still in institutions. This is one of the highest percentages received for institutional work and for apparently no special reason. The school is one of good standing with rather a high type of student nurse, but compared with other schools in the same locality the results are about the same. It is a denominational hospital in one of the smaller groups.

One of the large midwest training schools shows that only 8 per cent of its graduates are still in institutions while more than 53 per cent are married or retired. The total number of graduates in this instance is 951.

An unusual condition obtains in a Florida hospital where it is reported that only 2 per cent of the nurses are still in institutional work, that 45 per cent are married or retired and 50 per cent are doing private duty nursing. However, in this case, there were in all only about 65 graduates from the school.

Those in Other Professions

The group that concerns every hospital executive and every training school head is "other professions," and the larger study shows that this amounts to 4.26 per cent. Here are some of the other activities that are being pursued by graduates of nursing schools: Christian Science reader, physician, office work, physical directress, nun, foreign mission work, general business, lawyer, osteopath, insurance solicitor, school teacher, girls' camp director, masseuse and private secretary.

The question arises as to whether this situation much differs from that of other professions. A prominent artist deplores the fact that some students who spent months or years with him studying portrait painting have later been diverted into other types of art. Similarly, numerous qualified

teachers continuously drop out of that profession, and men who specialize in engineering or other professional studies for four college years often enter various business fields.

It has also been pointed out that as the nurse advances in years or becomes less rugged, private duty nursing, public health and institutional work are too strenuous; that in nursing, for the rank and file, there is no light work; that when no longer young or vigorous the nurse must perforce seek other fields of employment; that the far-sighted in the profession sense this situation and qualify for less exacting work, before youth and health are lost.

Training for Marriage

Granting the fact that a nursing education will make a woman a better and more intelligent wife and mother, the question naturally arises, is it the function of the hospital training school to supply this education solely for this purpose? Some have answered this question by saying, "Yes, the hospital is helping the community in its health problems by giving this training to those who will get married and is therefore doing an excellent work."

Others contend that the nurse training that is actually used by the wives and mothers could have been learned at their own expense in three months and that it is an economic loss to the hospital and therefore to the community to train a young woman over a period of from two to three years if she contemplates getting married and leaving the profession. Still others have stated that marriage is a law of nature and that it is utterly impossible to prevent a young woman from getting married, either with or without a nurse training, and that the apparently high percentage that is lost each year to the nursing profession through marriage, while deplorable, cannot be stopped.

These people emphasize the youth and attractiveness of the modern student nurse; cite frequent instances of those showing the least marriageable symptoms leaving the ranks first and claim that often the probationer who writes most copiously and convincingly as to her reasons for selecting nursing fails to make good, while one less assured later shows unexpected development and absorption of the true nursing spirit.

There are also those who claim that, under present conditions, any young woman who gives three, or even two years' service to one of the hospitals of the country has made her full contribution to society, if she never nurses again.

The grouping together of "married or retired" is not altogether satisfactory since not all nurses who marry retire and others return to their profession after a period of retirement. It is said that all over the country married nurses are found actively engaged in nursing, some of them the most valued and reliable members of the group they represent. Public health organizations carry many married nurses among their personnel and numerous private duty nurses are married women. Since the War conservative hospitals and schools of nursing employ on their staffs head nurses, instructors, even assistants, who, too valuable to be lost by marriage, have been retained and are giving excellent service to those institutions.

A prominent nurse leader has stated that the married graduate has doubled her influence wherever she may be; that she belongs among the most public spirited and devoted members of the profession; that she sends into the school of nursing young women of her community and advances nursing interests in innumerable ways.

Perhaps there is a suggestion in the fact that the training schools showing the largest percentages of marriages and retirement are those that have the lowest educational requirements, and the solution may be in a better training of nurses. Certainly it seems as if this were a partial solution and another partial solution is the more careful selection of the students.

Choosing on Trial and Error Basis

When a student is chosen on the trial and error basis and then given inadequate training, it is almost a certainty that she will escape from the profession just as soon as she can, either by entering some other profession or by marriage. If she is not capable of assimilating the training, or if she is so inadequately trained as to preclude her practicing her profession, it is perfectly logical that she should not remain a nurse. The superintendent of a good hospital has made the remark that when it is hard to attract students to the training school it is more logical to investigate the training school than blindly to blame women in general for not becoming nurses and then accept the first young women who apply, whether or not they are qualified.

The figures gathered for this study may or may not be of value generally to training schools. That the averages are fairly representative of schools in every part of the country and of all sizes may be indicative only of the present trend. It is doubtful if five years more will make an appreciable change, with the exception of an increase in the number of public health nurses and an imperceptible decrease in the death rate. It is probable that this increase in public health work will decrease the number of private duty nurses.

As group nursing and the hourly nursing system develop and are perfected, it is possible that the small percentage now entering other professions will be reduced considerably, so that the chief concern of the training school head now rests with that number who train and then get married. This is the largest percentage of any one group and while it will never disappear entirely, it may possibly be reduced considerably by proper selection and adequate training. On the other hand, this group could be trained to interpret intelligently to the public the needs and value of hospitals and schools of nursing. With such cooperation, hospitals could be sympathetically and comprehensively presented to the public and could thus elicit from the community the interest and assistance that is now too often lacking.

HOSPITALS ARE AWAKENING TO THE COST OF INDUSTRIAL ACCIDENT CASES

By Eileen F. Evans, Research Secretary, Consumers' League of Eastern Pennsylvania, Philadelphia.

There could be no more encouraging sign of the growing interest among hospital officials in workmen's compensation than the discussion aroused on this subject at the last meeting of the American Hospital Association. The comprehensive and well informed paper by Dr. Lewinski-Corwin, director, Hospital Information Bureau, New York, pointed out the failure of many state laws to provide necessary hospital and medical care, and cited significant examples of such inadequacy. Dr. John A. Lapp, National Catholic Welfare Council, Chicago, in his discussion of Dr. Corwin's paper, emphasized an important reason for this situation. Trained experts—surgeons, physicians, and hospital executives—best qualified to determine the amount of hospital treatment necessary, have had altogether too little to do with the drafting of workmen's compensation laws all over the country. The results are obvious—maximums of time and cost of care provided are absurdly low in many states, as has been shown by recent investigations.

The hospitals in Pennsylvania should have found this discussion particularly significant. What is merely a too frequent exception in many states, becomes a common occurrence in Pennsylvania. One of the richest industrial states in the country, it is outranked by at least thirty states and the Federal Government in provision for hospital care for industrial accident patients. A sample study was recently made by the Consumers' League of fourteen representative hospitals in Pennsylvania. At least 5 per cent of all the industrial accidents treated in these hospitals during six months of 1926 needed more than the thirty days or more than the hundred dollars' worth of hospital treatment provided in the Pennsylvania law. Many of these more serious injuries received months of hospital treatment with costs running into hundreds of dollars.

And what of the cost of this excessive service? In this small group of hospitals, during a period of only six months, $28,207 worth of treatment was given industrial accident patients beyond the provisions of Pennsylvania's law, and 70 per cent of it, almost $20,000, remained unpaid by the employer or his insurance carrier. How much longer will hospitals in Pennsylvania allow employers to repudiate this cost, long since accepted as a legitimate charge on industry?

In the general discussion of Dr. Corwin's paper, a warning was sounded that cannot be too much emphasized. Workmen's compensation, instituted to compensate workmen for time lost due to accidents for which industry was responsible, has become, through the growth of the commercial casualty insurance company, a more salable commodity. Hospital executives exert their best efforts to provide the finest possible care with the greatest economy of money and effort. They sell this service to insurance companies much below cost, and the insurance companies, in turn, sell it to employers at a profit. In two of the hospitals included in the study referred to, the proportion of cases running over thirty days was very high as both of them were situated near anthracite coal mines. But the coal companies sending both of them the greatest majority of their accident patients were self-injured and paid the entire hospital expenses, often running into hundreds of dollars. The average employer is anxious to fulfill the spirit of workmen's compensation, and to provide employees with all necessary care. To the commercial casualty company, however, workmen's compensation is a cold business proposition, figured in terms of profit and loss. It is useless to expect them to dispense payments for hospital care on the basis of need, when premiums are charged on the basis of a poor and inadequate law. The only way to relieve the situation—to provide injured workers with the care to which they are entitled and to protect hospitals from continued exploitation of industry—is to raise the standards of the workmen's compensation act, and to provide, by law, for adequate hospital and medical care. There is no defense for the absurd inadequacy of the Pennsylvania workmen's compensation law, or for the inertia of hospitals who will endure a continued and increasing deficit under its provisions without a determined effort at improvement.

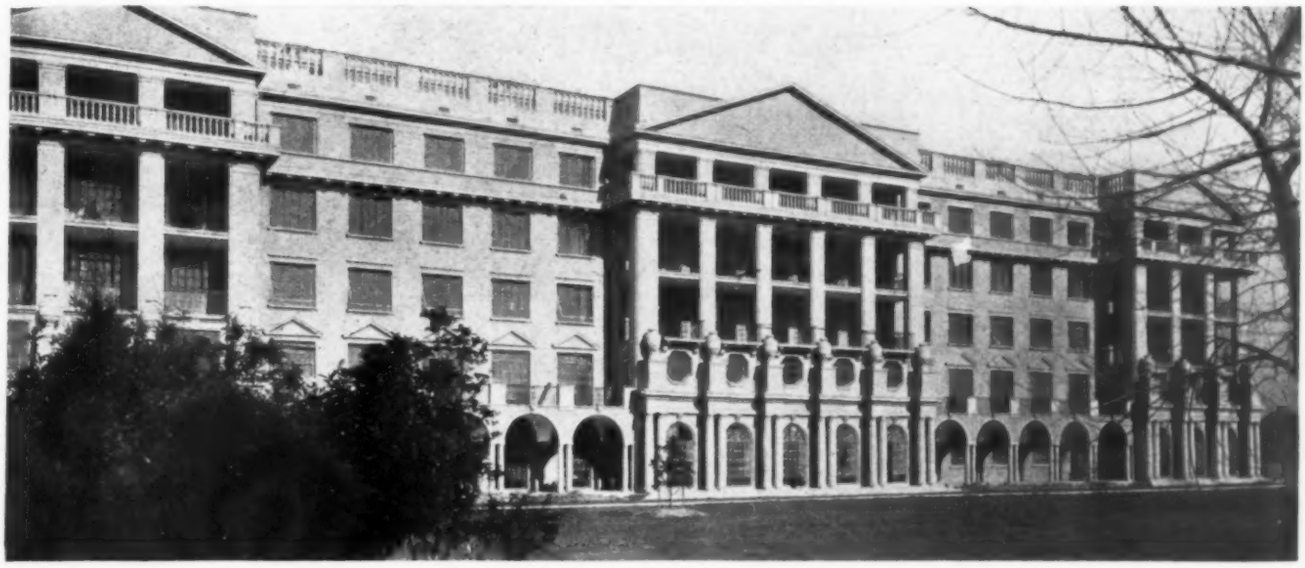
THE NURSING SITUATION FROM THE LAY VIEWPOINT

Discussing the nursing situation from the lay viewpoint, the *Philadelphia Record* comments editorially in part:

"Hospitals cherish a grievance against the nurse because, after having trained her, she deserts the wards for more profitable work in school nursing, industrial hygiene and public health activities. Families complain of high charges, limited hours of service, a dictatorial demeanor, and a lofty disinclination to help in smoothing the domestic tasks of a disordered household. Many families of moderate means, indeed, find the services of a trained nurse no longer within their reach.

"On her side, the nurse can and does make spirited answer that in view of her long, arduous and costly training she is entitled to the status and remuneration of a competent professional.

"Anyway, the problem of procuring more and cheaper nurses is important and complex, and study of it has been taken up seriously by committees including physicians, nurses and laymen. Many observers believe that the best solution would be the classification of nurses into several groups graded according to educational qualifications, experience, and technical training, so that patients might be able to procure help fitted to their varying needs and financial capacities."



The front of the Country Hospital from the garden approach.

DEVELOPING A COSMOPOLITAN MEMORIAL IN SHANGHAI

By William A. Angwin, M.D., F.A.C.S., Medical Corps, U. S. Navy, Seattle, Wash., and L. E. Hudec, B.A., Architect,
Shanghai, China.

TOWARD the end of the year 1923 the anonymous donor of the new Country Hospital, Shanghai, China, in sketching his program, stated that the atmosphere of the hospital should be friendly, different from that of the usual hospital; the appearance and style should be pleasing and adaptable to the cosmopolitan population of Shanghai; the building should answer the peculiar requirements of local conditions and be suitable for a semi-tropical climate, and the equipment should not be limited to the products of one country but that the products of all nations should be studied and the best used.

To have planned the building along the lines of European or American hospitals would have meant failure because of three major considerations: the local climatic conditions; the idiosyncracies of the various nationals in the international settlement, and the native staff and its peculiarities.

Naturally the buildings could have been planned differently had it not been for these considera-

A view of the main lobby showing the marble pillars and stairway.

A corner of one of the private rooms showing the casement type of windows used.

tions. For example, the diet kitchens and pantries had to be so located as to have the constant supervision of a foreign nurse. This explains the position of the nurses' rooms and pantries, which are opposite each other, with glass doors between, offering complete supervision of the diet kitchens and pantries.

Because of the climate it was essential to secure the southern exposure for all the wards and many rooms, since rooms with east, north or west exposures are inhabitable during a part of the year. This explains the unusual arrangement of rooms, which are grouped mainly on the south side.

The present plan, with all wards facing south, has proved to be the best arrangement. This is the reason for the seemingly uneconomical arrangement of rooms on one side of the corridor only, in the south part of the building. The northern part of the building contains the different service departments, such as the mechano, electro and hydrotherapy, x-ray, laundry, kitchen, pharmacy, laboratory, air and water cooling plants and operating rooms.

The doors of the hospital were opened for the reception of patients in July, 1926. The completion of the building and its presentation to the municipal council brought to fruition three years of thought and labor on the part of the donors, and their ideals of beauty and restfulness have been incorporated in the building together with the latest developments in hospital construction as adapted to the needs of this cosmopolitan community. How fully the donors' instructions have been carried out can be realized only by one who visits here.

The planning and planting of the garden in front of the building was begun nearly three years ago. Instead of the bare, ugly, debris-strewn surroundings of the usual new hospital construction, a beautiful vista of shrubbery and lawn and meandering walks greeted the first patient to enter the hospital. Facing the southern or principal side of the main building is a large lawn, the wide expanse of which is broken by trees and carefully arranged shrubs and plants. It is interesting to note, as indicative of the thought and attention to detail that has been given this structure, that the foliage of the garden includes specimens of nearly every

A corner of the children's ward made bright by nursery scenes on the walls and beds.

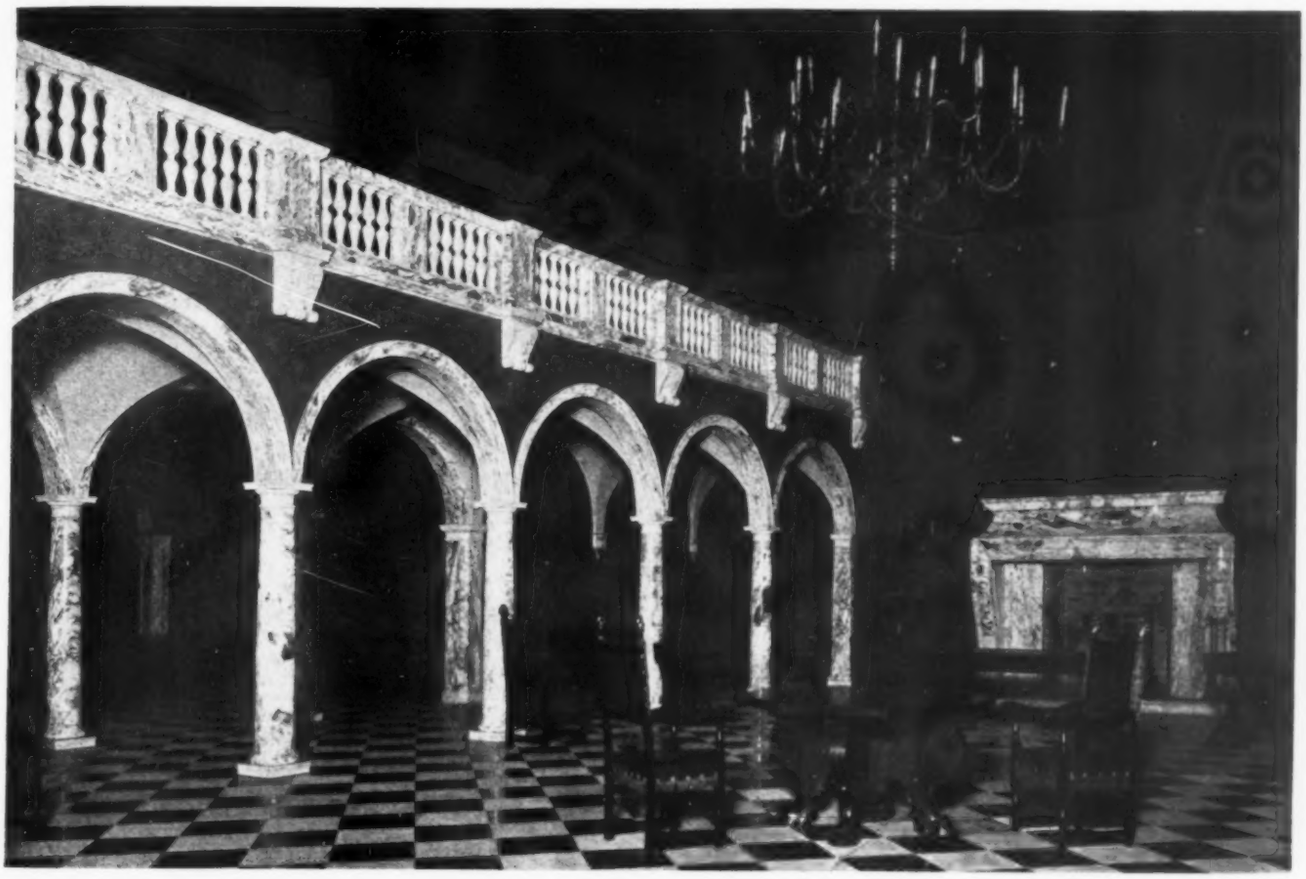
kind of tree, flower and shrub that grows in the vicinity of Shanghai, a good representation of the flora of this section of China.

The main hospital building is of reinforced concrete construction with stucco and stone exterior. Fireproofing is aided by the use of American made metal window sash and metal fireproof doors on stairway shafts. The cost of the construction and equipment was approximately $1,000,000.

The building ground plan is in the form of the letter H, the southern wing, which is about 260 feet long, being primarily for patients and the smaller northern wing for service. These two wings are connected by a corridor section. The maximum capacity is rated at 150, with a normal accommodation for 124 patients.

The general entrance to the grounds and buildings is from Great Western Road on the north where ample parking space is provided. The main or visitors' entrance to the building is on the east side of the connecting corridor, and the ambulance and service entrance is on the north side of the service wing. To the right of the main entrance is the small gatekeeper's lodge.

On entering, the eye is immediately struck by the unusual architectural treatment of the lobby and reception room. They are Italian in design and atmosphere in accordance with the wish of the donors who spent many years in Italy and have great admiration for Italian architecture. The marble columns and stairway, the groined vaulted arches and the black and white block marble floor of the lobby blend into the vista of the large reception room by way of the casement windows through which there flits a glimpse of the colorful garden. The walls of the reception room rise two stories high and, with the overhanging marble railed balcony, the solid oak heavy beamed ceiling, the large fireplace and mantel, remind the visitor of the rooms of a villa in Tuscany. The marble, fittings and furniture for these rooms were all imported from Italy, the furniture being especially designed for the hospital.



A view of the two-story Italian hall showing the marble vaulted arch es and balcony, black and white marble floor and fireplace.

Facing the visitors' entrance is the office of the superintendent and the hospital telephone switchboard. On the west end of the southern wing are the resident physicians' quarters, engineer's quarters, a private suite for patients who wish to be near the garden and a ladies' rest room off the reception hall. On the east end are two ten-bed wards, one for men and one for women. The eastern section of this floor was constructed with

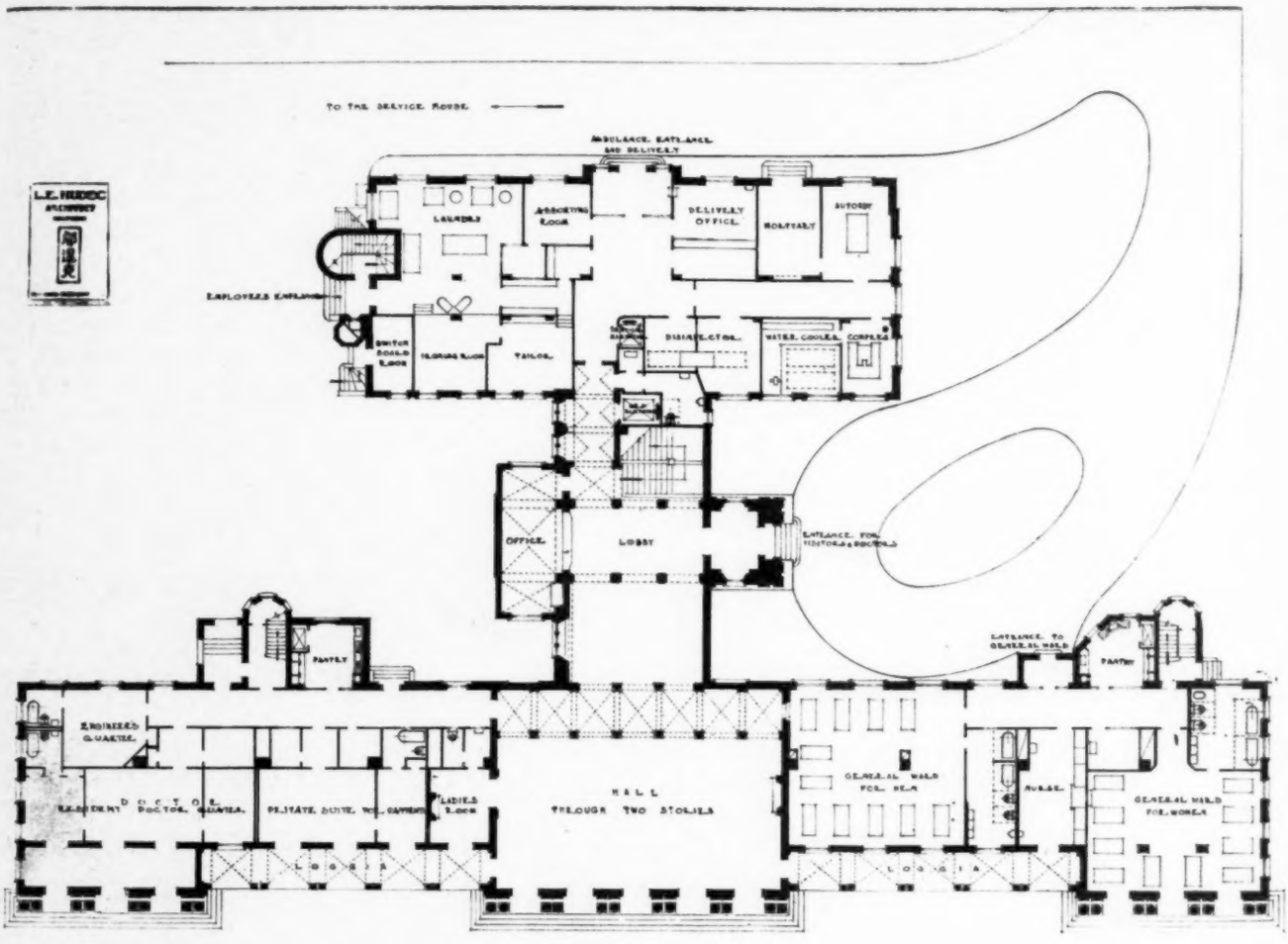
a view toward making it an out-patient department, when the need arises, but at present the medical profession in Shanghai is not prepared to take up that phase of hospital work.

On the ground floor of the service wing are the ambulance entrance, receiving room, business office, where records and files are kept, two rooms for autopsy and mortuary, a complete ammonia ice-making and refrigerating plant, steam autoclave disinfector and the laundry. The laundry is equipped with the latest type of United States

a separate nurse's room, a small play room and a sun porch. Special thought and care have been given to the decorations and furnishings of this department so as to make it attractive to the small patients.

Off the connecting corridor of this floor is the resident physician's office and the office supply room.

This floor of the service wing is devoted to physiotherapy and psychiatry. The physiotherapy department is much larger than is usually found in



Ground floor plan.

laundry mechanical features including washers, dryer, centrifuge, mangle and steam ironers—an uncommon innovation in China where labor is so cheap. In connection with the laundry is the linen repair and sewing room and a laundry assorting room. Soiled linen and clothes are brought to the laundry from the various hospital units in locked wicker containers which are opened in the laundry. Clean linen is issued to each unit piece by piece.

The first floor of the patients' wing is given over to small wards, ranging from four to eight beds with two single-bed quiet rooms. At the eastern end is the ten-bed children's ward, with

hospitals of this size and is complete in every detail. The flooring is mosaic tile in pleasing design. Equipment includes a vaporizing room for nasal and throat conditions, a tiled Roman plunge, Nauheim bath, two sitz-baths, three foot baths, whirling baths for leg and arm, continuous flow tub, nozzle table, needle shower, perineal douche, spray bed and steam cabinets. There are seven rest and massage rooms.

The electrotherapy room is fitted with latest German made equipment and is complete for treatment by light, heat, electric currents and diathermy. A room has been set aside for mechanotherapy, but the equipment has not yet

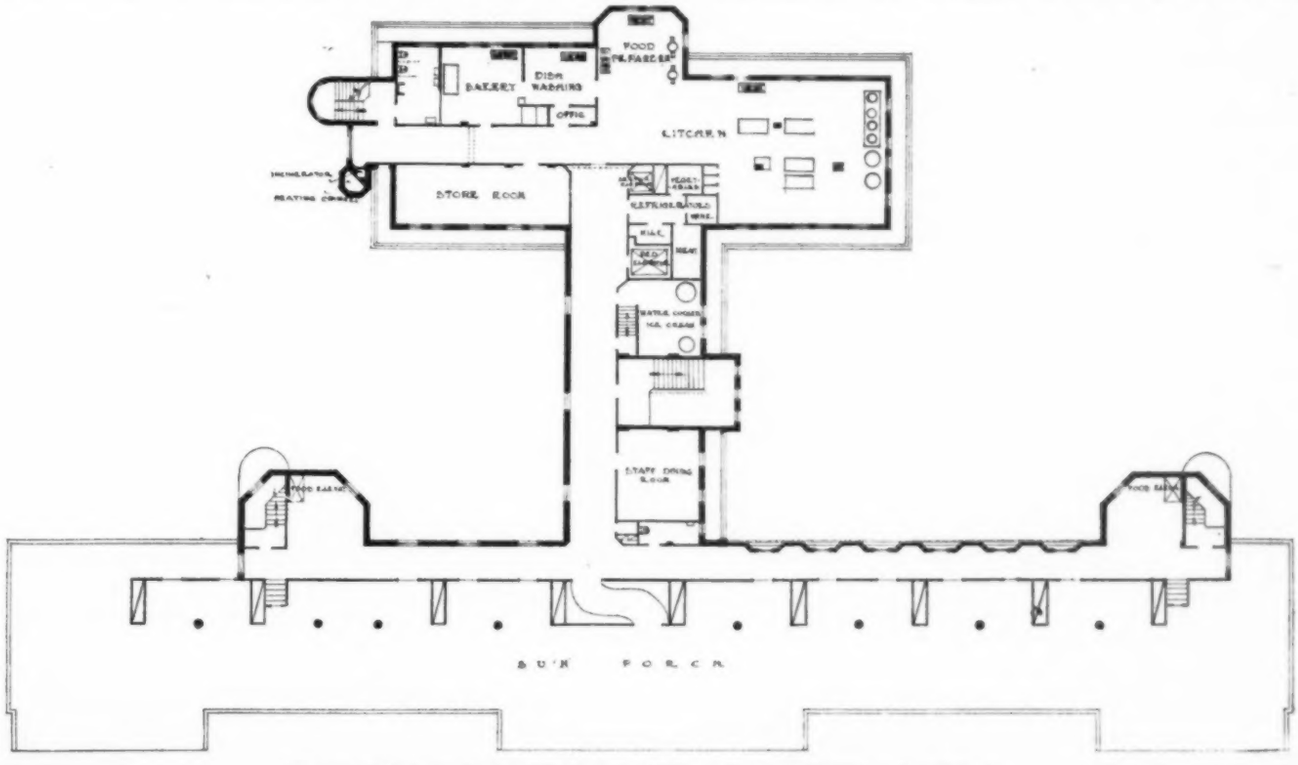
A view of the kitchen located on the fifth floor.

been installed. The psychiatric department consists of two-bed rooms, an examining room and a continuous bath and treatment room. The location near the physiotherapy section is well suited for a small hospital.

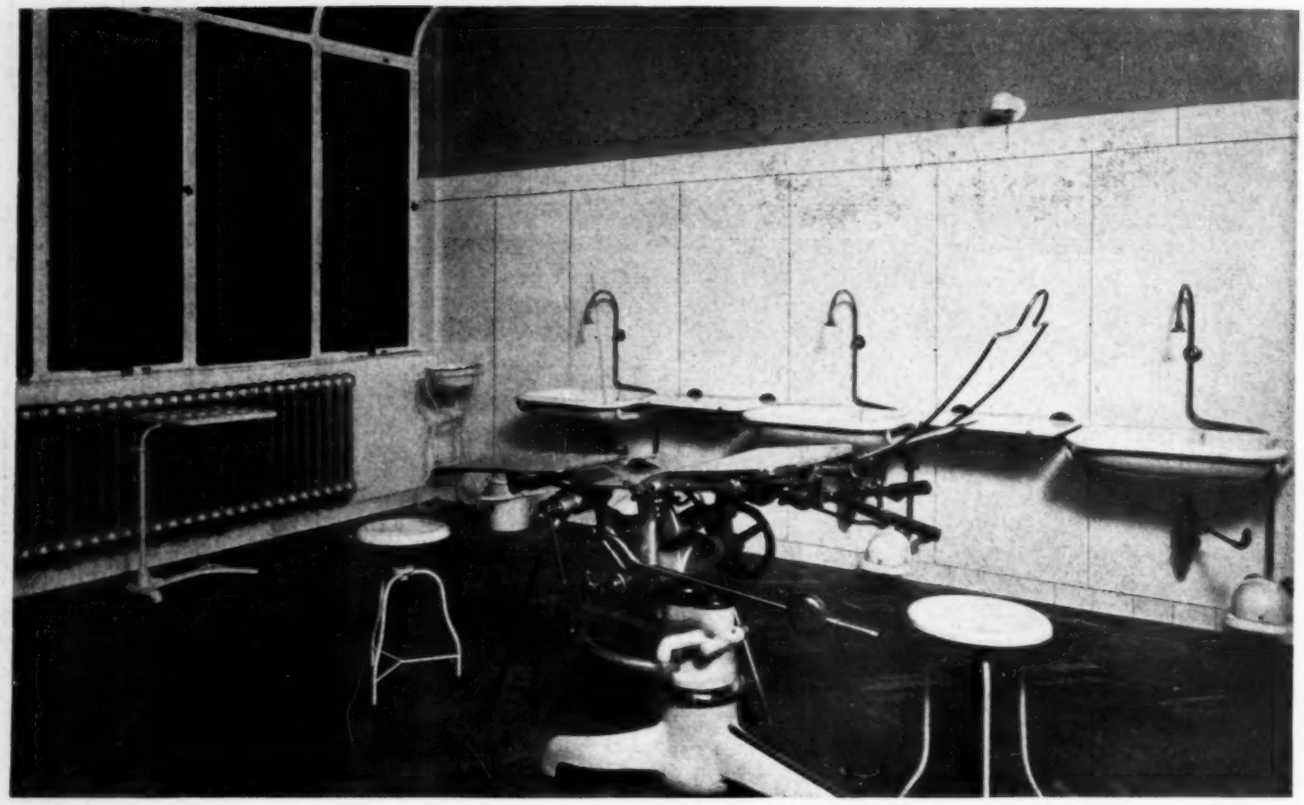
On the second floor of the service wing is the maternity section, consisting of a delivery room, two labor rooms with separate toilets and connecting baths and an isolation corridor, four one to three-bed wards and a nursery for eight infants. The labor and delivery rooms are connected with the cooled air ventilating system that is used.

The nursery is separated from the maternity room, but is not actually isolated. It is equipped with a baby incubator and bedding warmer and has a separate bathroom with spray showers. Diets for this section are made up in the diet kitchen of the maternity section. On this floor are also the dispensary and laboratory.

Off the third floor connecting corridor is an eye examining room and a dark room. The service wing floor is devoted to the surgery and x-ray. The x-ray department is housed in two rooms with a machine room between. One room is fitted



Plan of fifth floor, the back wing of which houses the food service department.



A view of one of the operating rooms located on the third floor.

for deep therapy and the other for general radiography and fluoroscopy. The walls, ceilings and floors of these rooms are lined with barium brick.

The surgery has two major operating rooms, one for minor surgery, a treatment and fracture room, cystoscopy room, anesthesia room, two instrument rooms, sterilizer and workroom and a surgeons' lounge room. One major operating room is connected with the cooled air ventilating system. The equipment of the operating rooms is of latest German manufacture. Scrub-up basins are placed in the operating rooms, instrument cabinets are glass inclosed in the wall between the main operating room and the instrument room, and the instrument sterilizers are under inclosed hoods in these same walls.

The rooms are well lighted by a combined wall and ceiling window, but the clear glass window panes necessitate curtains which are provided in opaque white and black. Night lighting is by a battery of six spot lights. The surgeons' lounge has two showers, wash basin and toilet, lockers and comfortable furniture. It has a separate entrance from the connecting corridor.

The fourth floor is temporarily given over to the nursing staff until such time as a nurses' home may be provided. A cozy sitting room has been very tastily furnished for the comfort of the nurses. It connects by French doors with an attractive dining room, and these rooms open on a large veranda. On this floor in the service wing a room originally intended as a dormitory for the native nursing staff has been converted into a general storeroom. Two rooms over the raised ceilings of the major operating rooms are used for linen storage. The electrically operated air cooling plant is also located here.

On the fifth floor of the service wing is the kitchen—a large, light, airy room fitted with the latest German equipment of range, steam pressure cookers, steamers and mechanical devices for preparing foods. Here also are the office of the dietitian, bakery, food storeroom, cold storage rooms and foreign staff dining rooms.

From the south corridor of this floor is a ramp walk to the roof on which are seven large roofed-in cubicles with a normal space for fifteen bed patients and an expanded capacity for twenty-two patients. The large roof itself, from which there is a beautiful panorama of the city and its environs, furnishes a splendid sun promenade for patients, as it is well guarded from winds by the high solid concrete coping.

Communication between floors is by a main stairway with treads of terrazzo, three enclosed fire stairs used also as service stairs, one large elevator capable of carrying a bed, and one small elevator. On each floor are two nurses' stations where silent room calls are flashed and where records of patients and current supplies are kept.

WHAT EQUIPMENT IS NEEDED IN THE SMALL TUBERCULOSIS SANATORIUM?*

By James D. Burt, Architect, New York State Department of Health,
New York

AS SOON as a hospital board of directors has decided that a hospital should be built the superintendent of the proposed institution should be appointed. It may not be necessary to pay him a full salary until the work shall engage his entire time; the amount of remuneration is purely a matter of agreement between the board of directors and the superintendent. The reason for this is obvious. If the superintendent is appointed thus early he will be better fitted to carry on the work, will be possessed of invaluable information and will be able to confer with the board and the architect with regard to every detail of the new building and its equipment.

There have been numerous examples of hospitals being well advanced before the matter of equipment was given consideration, with the inevitable result that space necessary for certain fixtures has not been provided for in the plans, leading to serious difficulties and added expense.

An architect, however familiar with the requirements of a hospital, needs to consult with the proposed superintendent as to the planning, and especially as to the equipment of the hospital. Never have two persons agreed on what is the essential equipment of a hospital, and until standards are adopted and become absolute, and the matter is reduced to an exact science there will continue to be diverse opinions. The best we can do is to try to arrive at a common understanding.

Essential Equipment

What should constitute the essential equipment of a tuberculosis hospital of fifty beds? There are three methods of procedure to ascertain what is needed: First, we can take the manufacturers' catalogues and order one or more of each article named there; second, we can take someone's list and follow that, or, third, the architect and superintendent can sit down at a table and with the combined knowledge and experience of both experts, agree on what should constitute the essential equipment of the particular hospital.

The latter plan is, of course, the obvious one to follow. The superintendent being a physician, will have knowledge of all of the latest and necessary devices relating purely to the medical and surgical care of the patients; the architect will carefully cover every detail relating to them, by his specifications provide the proper spaces for them, and show their correct relationship on his drawings. This method ought to insure the inclusion of every essential feature and omit nothing of real importance.

While doubtless the larger number of us will agree on certain main necessities in equipping a hospital, we should not proceed far in a list of fixtures, implements and devices without being challenged by some divergent opinion. Any such list would at best be but a guide or checking list and such schedules are already numerous and redundant. If, however, we can arrive at a working principle upon which to base our requirements we shall be setting forth a useful program.

Rule for Furnishing Hospital

If we would propound a rule for the furnishing of a tuberculosis hospital ready for the reception of patients it would run something like this:

Provide every instrument and device necessary for the intelligent and expert examination and diagnosis of suspects of tuberculosis and kindred diseases, with as much certainty and exactness as the latest approved and modern methods allow.

Provide all rooms, porches, heliotherapy spaces, fixtures, furnishings and fittings, necessary to insure, as far as possible, adequate physical comfort, wholesome and helpful recreation, and cheerfulness of spirit.

To the above might be added the spaces and equipment necessary for the disposal of the bodies of those unfortunate ones who came to the hospital too late.

The second paragraph of the above rule applies to all who abide in the hospital or who spend a considerable portion of every day there. Doctors, technicians, nurses, domestics and other employees are becoming more and more difficult to obtain at prices the ordinary hospital can afford to pay. They must therefore be made comfortable, and considerable pains must be taken to make them happy and contented. The annual cost of continual turnover, with its accompanying inefficiency, can hardly be measured. It is far wiser from every standpoint, to expend sufficient money to make the various positions attractive enough to

*This is the sixth of a series of articles to appear in succeeding issues of The Modern Hospital, dealing with the planning, equipment, organization and operation of tuberculosis sanatoriums and preventoriums. This series is being prepared under the direction of Robinson Bosworth, M.D., Rockford Municipal Tuberculosis Sanatorium, Rockford, Ill.

insure satisfied and continuous incumbents. No aspect of a superintendent's job is quite so difficult as the handling of disgruntled and dissatisfied employees with their constant tendency to undermine the morale and sap the loyalty of all other employees. When this discontent is based on a cause which the superintendent is powerless to remedy, due to faults in the original building, or inadequacy of provision for the comfort of the complainer, the difficulty is still greater.

Of course, the policy pursued by the superintendent has much to do with the esprit de corps. No arbitrary and dogmatic "boss" who plays king in his little domain has any right to hope for success in getting along with men and women who have ability and self-respect. The best built and best equipped hospital in the world may be an utter failure without the human and friendly guidance of the able administrator; he is the mainspring without whose effective efforts the whole thing is out of joint and will not function—the investment is a failure.

As intimated before, we shall not attempt to list the articles of equipment necessary for our hospital but shall content ourselves with the mention of some of the things that require special thought and care. We assume in this that the hospital has been carefully planned and contains within itself proper and adequate rooms, porches and other spaces sufficient for the needs of all who are to find shelter there.

Location of Heating Plant

If possible it is best to have the heating plant in a separate wing or in a small building with the laundry overhead. If a shop is needed for the plumber, steam fitter or electrician this should be connected to the boiler room, as often the engineer must look after the many items of repair and replacement. A carpenter and paint shop might be located elsewhere.

The boiler room should be equipped with the necessary apparatus to heat the plant by steam by direct radiation; all radiators should be carried in brackets free of the floor.

A high pressure steam boiler, carrying 80 pounds for laundry, kitchen and sterilizers, should also be provided.

If electrical current is to be produced a separate room should be built in connection with the boiler room for a dynamo room. It is usually found to be more economical, however, to purchase current rather than to produce it when such service comes within reasonable distance of the hospital.

When the water supply is found to be hard it is satisfactory and economical to install a water softener which may be placed in the boiler room.

Even where ice is at hand and easily harvested, it may be more economical and is certainly far more convenient, to install a system of mechanical refrigeration than to depend on the old method of using natural ice with its attendant cost of cutting, housing, delivery, wastage and litter.

Gas for the kitchen range, and for plates in the serving pantry, the diet kitchen, the utility rooms and the laboratory, is desirable and should be included in some form when at all possible. A satisfactory private plant may be put in, which would not be prohibitive in cost.

Proper Disposal of Garbage

Arrangements should be made for the proper sanitary disposal of garbage, waste and sputum by burning. An effective furnace is made that will accomplish this, and will heat water for domestic purposes as well. A combination of this and steam coils from the high pressure boiler passing through the hot water storage tank would be found to be an economical use of what would otherwise be waste heat.

The system of lights, signals and outlets for power should be carefully studied so as to provide adequate illumination; silent calls from each bed to the nurses' stations and a telephone and signal system by which the physician may receive instant notice of a need for his services. Abundant outlets should also be provided for the attaching of fans, sweepers, sewing machines, hot plates, ice cream freezers, food grinders, potato peelers and other apparatus.

The quality of materials used, the character of workmanship and the type and kind of plumbing fixtures installed, are matters of great importance and mean much to the well-being of patients and others, as well as to the peace of mind of all who are responsible for the successful conduct of the hospital, and painstaking carefulness should be exercised to insure satisfactory work.

Not only should attention be given to the manner of installing the system of pipes, traps and cleanouts in order that they may be accessible for repair work, but the fixtures should be chosen by experienced persons, to insure effective working, ease in cleaning, durability and good appearance. We place appearance last because it is of least importance, although if the other three qualities are satisfied there will generally be no difficulty as to the last.

Another quality should be mentioned relating to plumbing fixtures and to many other mechanical fittings used in a hospital, that is, the matter of simplicity in construction and operation. Intricate machines and fixtures require special knowledge and unusual care; their parts are

easily broken, disordered or lost and are generally hard to replace; it is a pretty safe rule to use the types that have either been standardized or are obviously superior and promise to give good service.

Much money has been wasted in the installation of costly paraphernalia that has failed to render the service expected of it. Either the expert knowledge necessary for handling the equipment is lacking, or the thing itself is a failure. Meantime it is occupying valuable space, yet the superintendent does not feel justified in discarding it for it has cost much money. The road may be somewhat long but it is headed for the scrap-heap and will be numbered among the costly regrets of the institution.

With due regard to the number of persons to be cared for, and the funds available, every tried and satisfactory labor-saving machines should be provided. Reliable help is increasingly difficult and costly to obtain, and any invention that can take its place helps to solve the problem.

Even in small hospitals the x-ray outfit has become a necessity and should be installed, together with such accompanying fittings and accessories as make it effective and satisfactory.

Increase of Occupational Therapy

For all ambulant cases and for many bed cases occupational therapy is being increasingly employed. Necessary equipment for this is not costly and the sale of the articles made by the patients will go far to pay for materials used and, in some cases, to remunerate the maker. A good work room with rooms for finishing and supplies, necessary benches, tools, simple machines and outlets for the use of small power will meet all requirements.

It is one thing to have a properly equipped hospital, but quite another matter to preserve it by intelligent care.

Expenditure of considerable sums of money for the original plant and furnishings is largely an unjustifiable waste of funds if the costly result is not properly cared for. This must be done by those who still retain a conscience and who have not been overwhelmed by the modern *laissez faire* spirit of rendering as little service as possible for the greatest return in money.

In view of the mounting cost of building, due to exhorbitant wages and the inefficiency of labor, architects must more carefully study their plans to eliminate all unnecessary help. A judicious use of labor-saving machinery is one sure way of doing this, and careful planning is even more important so that the relationship of one part to another may be convenient and step-saving.

A well equipped hospital is not one that is supplied with every known contrivance and convenience, but one that is furnished with the necessary rooms and equipment by the aid of which the community is served well and promptly, at reasonable cost and with the maximum of comfort and satisfaction to all concerned.

COMPENSATION LAWS BEING ALTERED BY VARIOUS STATES

That attention is being focussed upon the alteration of the workmen's compensation law, with respect to medical and hospital treatment, in many of the states is shown by the number of bills that are now before the various state legislatures. In the state of California two bills pertaining to workmens' compensation are now before the legislature. Bill 1051 defines the meaning of the term injury. Bill 1013 regulates the duration of liability for medical treatment of injured workmen and House Bill 587 includes tuberculosis in the list of compensable diseases.

In Michigan Senate Bills 13 and 19 have been introduced to amend the workmen's compensation law, by including certain occupational diseases. In Minnesota Senate Bill 125 would amend the workmen's compensation law so as to include hernia among compensable injuries. In New Hampshire House Bill 275 defines occupational disease included within the workmen's compensation act of this state.

In the state of New York Senate Bill 187 amends the workmen's compensation law so as to include all disabling diseases and illnesses in the list of occupational diseases for which compensation is payable. Likewise Senate Bill 179 and House Bill 130 would amend the workmen's compensation law so as to provide that all fees for treatment and care of injured employees shall be paid as soon as possible after being presented.

In North Dakota House Bill 91 provides a method of appeal from the decisions of the workmen's compensation bureau. House Bill 202 presented to the legislature of West Virginia provides for the appeal of the section of the workmen's compensation law relating to medical fees.

SPECIAL TRAINING FOR HOSPITAL LIBRARIANS

That the hospital library is an essential part of the hospital is now becoming generally recognized, and the librarian in charge, to be of greatest benefit to the patient, must be capably trained. Where the hospital is of 200 beds or more the public libraries of the cities generally assign a trained librarian to the individual hospitals. In order to make available special trained librarians for hospital work the University of Minnesota, Minneapolis, Minn., has adopted a course of study for hospital librarians.

The course includes three years of academic work with emphasis upon languages, English courses, social sciences and history. The fourth year is given over almost entirely to library training and the fifth to specialization in hospital needs and practices. The course includes full training in the therapeutic value of reading, hospital library administration, literature for use of hospital groups and field work in the hospital library.

STUDIES ON HOSPITAL PROCEDURES

THE MATERNITY DEPARTMENT*

The Postnatal Clinic

IN THE preceding issue of THE MODERN HOSPITAL the functions of the maternity department and the procedures usually carried out therein were discussed in considerable detail. It is now our intention to complete the discussion of this department by setting forth some facts relative to the organization and work of the postnatal clinic.

In most hospitals it is felt best to assign the care of newborn infants to the pediatric staff. Indeed, this policy has the rather general support of obstetricians. It, therefore, appears reasonable and effective for the postnatal clinic to be supervised by representatives of this group, rather than by members of the obstetrical staff.

The postnatal clinic is usually conducted in the same quarters that are allocated to the prenatal clinic, and the same physicians, nurses and social workers are assigned to this work. As has been intimated elsewhere, it appears best for the same personnel to conduct both clinics, as well as to be on duty in the maternity wards, because it assures the patient of a continued interest and service from the time she applies to the prenatal clinic until the baby is weaned. Patients object to retelling their symptoms and life story to an interested but uninformed person each time the services of a new clinic are required.

This same continuity of effort on the patient's behalf can be maintained by the clinic visitations of the dietitian and the occupational therapist with whom the patient first came in contact months before. The services of these workers are often very necessary to the mother and her child during the first year of the latter's life. There are many practical dietetic hints that the mother requires, and the advice of the occupational therapist is often needed in the preparation of proper clothing for the baby.

It is customary to insist that the mother and the baby return to the hospital, at least, three times during the year succeeding delivery; namely, at the end of one month; at the end of six months, and after the baby is weaned. But this frequency of visitation can be set down only as an advisable routine, since the number of visits required will depend largely upon the state of the health of the mother and child, as well as upon the intelligence and cooperation of the former.

An efficient liaison between clinics in the hospital is most necessary. In the postnatal clinic, for example, it may be necessary to refer the mother to the gynecological clinic for perineal repair work or for other needed attention. Often the service of another clinic, such as that for cardiac disease, or for the study and treatment of metabolic conditions, is required in the preservation of the mother's health, which now, more than ever, is of great importance to her, because of her new responsibility—the child.

As far as the child is concerned, when its attendance at the postnatal clinic is finished, it is sometimes necessary to continue the supervision of its health in the children's clinic.

It can be seen that through the clinic system and the maternity wards of the hospital the welfare of both the mother and the child can be intelligently supervised.

There are two documents which, for numerous reasons, are of the utmost importance to human beings generally—the certificate of birth and of death.

Often the physician is importuned to alter the birth or the death certificate, in order to meet some supposed or real situation in the personal life, or that of the family of the one most concerned. The question of legitimacy or illegitimacy, of course, enters into the execution of the former.

The duty of the physician and that of the hospital is clear in this matter, and nothing but a statement of the truth can be consonant with the best traditions of the hospital and of the medical profession. The filing by the hospital of a duplicate of the birth certificate is usually considered necessary, in order to meet a need for reference thereto later.

Finally, it may be stated that in the hospital there should exist definite rules forbidding the visitation of the maternity department by interns or nurses who are serving on the erysipelas, venereal or contagious wards.

THE RADIOLOGICAL DEPARTMENT

Most hospitals possess an x-ray division in which radiographic work is done. Many have not only radiographic and x-ray treatment facilities, but also own, or have access to, radium or its emanation.

It is suggested that as a descriptive nomenclature, covering such activities, the term "radio-

*Continued from the March number.

logical department" be employed, the divisions of x-ray and of radium comprising this department. The functions of these two divisions are somewhat similar in that each concerns itself with the treatment of similar conditions, although the former is often largely diagnostic in its activities.

It is interesting to note, in this connection, that the discovery of Roentgen, at Würzburg, Germany, in 1895, was quickly followed in 1896 by the announcement that a radioactive substance that possessed some of the properties exhibited by the x-ray had been isolated by Professor and Madame Curie.

The names of these discoveries have found a permanent and prominent place in the nomenclature of the science that has developed as a result of their work. In the former instance, the new ray, which was found to result when the cathode ray strikes an object, was named after its discoverer, and a unit of measurement in the therapeutic use of radium, the millicurie, received its name from those whose research gave this element to the scientific world.

From the standpoint of function and administration, these two divisions may be further subdivided. Dependent more or less upon the functions carried out in the division of x-ray will be the subdivisions that appear in the scheme of organization. These may be set down as the subdivisions of: (1) fluoroscopy, (2) roentgenography, (3) x-ray therapeutics, (4) physics.

In the radium division there is to be found as necessary subdivisions the *physical laboratory* for the withdrawal and measurement of radium emanations, if the hospital possesses a sufficient quantity, so that this gas is used, and not the salt itself.

Laboratory for Radium Apparatus

In this laboratory will be prepared the various types of apparatus for applying radium to a particular part of the body. Reference is here made to the shaping of gutta-percha casts, or molds, or the preparation of other special apparatus required by the physician employing radium in the treatment of disease. It is of the greatest importance also for the services of a glass-blower to be available, particularly if a mercury pump is used to withdraw the emanation from the radium salts.

In the treatment of the various conditions that yield to radium therapy, an *out-patient clinic* is also necessary, as well as a number of *ward or room beds* for the care of late cases or for other conditions requiring hospitalization.

There are a number of considerations that will determine the location of the x-ray division. The need which the surgeon often feels for the diagnostic aid of the x-ray division demands that these facilities be available in the operating suite on short notice. It has been often felt wise, therefore, to locate the x-ray division in the same building or even on the same floor with the operating rooms. However, the development of a satisfactory portable x-ray machine, which can be operated from almost any light circuit, has made it possible for x-ray studies to be made quickly within the operating room without transporting the patient to the Roentgen-ray division at all.

Because of the deleterious effect of long exposure to the x-ray, it is not customary to place the x-ray division in a location over which, or under which, ward or room patients are being treated. This can, and has been, successfully done, however, without any apparent harm to patients in other wards. But to do so requires the adoption of rather expensive safety measures to prevent the x-rays from escaping from the room in which they are being generated. Further mention of this subject will be made later.

The X-ray Division

Then, too, the location and the arrangement of the x-ray division must be considered in the light of preventing the rather definite industrial hazard to which nurses and physicians employed therein are subjected.

The x-ray division must consist of a number of separate rooms for the conduct of efficient roentgenographic and fluoroscopic work. These rooms should be ample in size, and, in the performance of roentgenoscopy, should be capable of permanent or temporary darkening.

In the fluoroscopic room or adjacent thereto should be one or more dressing rooms which need not possess a larger floor space than twenty-five or thirty square feet, and a room for mixing the barium preparations used. Toilet facilities should also be provided.

Usually, the fluoroscopic room is finished with a grey or green shade of paint, and a vestibule, equipped with double doors, enabling one to enter the rooms without admitting light, is of the greatest utility.

The roentgenographic suite usually consists of a machine room; an instrument or control room, in which the operator is located; a plate loading room, with an apparatus devised for passing plates from a light to a dark room, without admitting light to the latter; a developing room, located next to the loading room, with wall apertures for the passing of exposed plates for developing; a plate reading room; a storage room for supplies and for the preservation of exposed and non-ex-

posed plates or films; a separate room for the performance of dental x-ray work and a cystoscopic and bronchoscopic room.

It is a wise plan to provide outside of this group ample waiting room space for visitors and those awaiting examination or treatment. In so far as the treatment function of this division is concerned, sufficient room should be provided for a number of small treatment cubicles, which need be only of such size as to accommodate a tube stand, and a bed or stretcher. The number of these rooms will depend upon the volume of treatment work being done. They may be arranged in a row, with the control booth for the operator so situated as to command a free vision of each patient undergoing x-ray treatment.

In conjunction with this therapeutic work, it has been found necessary for a small dressing room to be located nearby with instrument sterilizer and cabinets for the storage of needed dressing materials. Patients suffering with malignancies, particularly in cases where sloughing has taken place, require surgical dressing on the occasion of their visit to the hospital for x-ray treatment.

In so far as the fourth subdivision is concerned, there can be no difference of opinion as to the service which can and should be rendered to the x-ray division by a well trained physicist.

It can be stated without hesitation that too often x-ray treatment is given without adequate information on the part of the physician with regard to the depth of penetration, and, hence, as to whether this therapeutic agent is actually being applied to the tissues in which the disease exists. More and more are x-ray therapeutists demanding that the machine which they are using be, at more or less regular intervals, checked by a physicist, to determine what its relative efficiency is, and whether the dosage scale being employed is correct.

Booth for Physicist's Instruments

In some places a small booth is constructed in which the physicist installs his instruments of precision for routinely studying the efficiency of the x-ray machine. Hence, the physicist is rapidly becoming an important member of the personnel of this division.

In the planning and construction of an x-ray division the elements of convenience and safety largely enter. Mention has been made of the need for a proper arrangement of the rooms in this suite, in so far as the convenience of the operator and patient is concerned. Much thought has also been given by hospital architects, superintendents and physicians, to the problem of safeguarding the health of those who are exposed to the continued effect of the x-ray.

When the x-ray was first used, and for a number of years thereafter, no attention was given to safeguarding the health of the operator, because the action of the x-ray on tissues was then so little understood. As a result, a number of distinguished physicians lost their lives or were permanently crippled from too long continued x-ray exposure.

Protection of Workers

It is a well known fact that x-rays travel in straight lines, with but little deflection or reflection, and this knowledge is utilized in protecting those working with this agent. Hence, nowadays, the operator is universally protected by the interposition of some element which is impervious to the x-ray. One-fourth inch of sheet lead is usually employed for this purpose. Leaded glass is utilized where vision of the patient being treated is desired by the operator.

Where patients are housed above or below the x-ray division the walls and ceilings of the room in which the machine is located are lined with lead of the thickness mentioned.

Barium is another substance that is impervious to the x-ray, and sometimes a barium plaster is applied to the walls and ceilings of x-ray rooms to serve the same purpose as does lead. The expense of this plaster has been brought to a point where it appears to be a useful addition to the protective measures available for this purpose.

Should a hospital superintendent desire to be certain that x-rays, in harmful amount, are not reaching a patient's room or ward, he may place a dental film in the room being tested, and if, after several days, there is no clouding of the film on development, he may rest assured as to the safety of his patient. Roentgen operators often carry such a film in their pockets, to learn the degree of exposure to which they are being subjected.

A second danger that arises in this division is that of contact with exposed electric wires by patients and operators. The floors of the whole division should be covered with some efficient nonconductor, such as sheet rubber, wood or linoleum. Perhaps the best floor covering for this use is rubber, of about one-quarter inch in thickness.

There has been devised a rubber covering for floors, and even walls and ceilings, into which lead has been impregnated. Those informed on this subject seem to believe that this type of protection is relatively economical and adequate. Overhead wiring, at a height that prevents contact by those working in any of the rooms of this division, is certainly advisable.

Where high-voltage x-ray machines are in operation, the tube itself is often placed in a leaded chamber, with an aperture below, through which the x-rays escape in the treatment of the patient. When this type of apparatus is employed less attention may safely be given to the leading of walls and ceilings, because exposure to the secondary rays only is probable.

A third protective measure, to which thought must be given, is the reduction of the fire risk, which arises as a result of the frequent inflammability of x-ray films. There are a number of films on the market today, which are said to be slow-burning, or even non-inflammable. Fireproof rooms, with metal doors and leaded glass windows, are often constructed for storing films. Sometimes air-tight, steel compartments serve the same purpose.

Equipment

One of the most expensive outlays required by the hospital is that for the construction and equipment of the x-ray division.

In small hospitals where but one machine is needed the relative cost of this apparatus is as great as it is in the large hospital where two or more machines are required. On the other hand, the income from the x-ray division is often very adequate, comparatively speaking, the hospital not infrequently realizing a considerable profit from this work.

Below will be set forth a list of x-ray apparatus, with an approximation of its cost, which one large hospital has recently installed. If but one machine is adequate for both roentenographic and treatment work, this list may be interpreted in this light. If deep x-ray therapy is to be employed, a machine of high voltage, which is capable of generating from two hundred and fifty to three hundred thousand volts, will be found to be necessary.

X-ray Treatment Section
(Deep X-Ray Therapy)

1	210 K. V. Deep therapy Roentgen generator, complete with filament and control stand, at an approximate cost of	$3,200.00
1	Milliampere meter, approximate cost	115.00
1	Tube holder and tube (water cooled), approximate cost	3,100.00
1	Treatment table, approximate cost	80.00
	Treatment diaphragms, copper and aluminum filters, approximate cost (The former is usually ¼ mm., and the latter, from one to two mm. in thickness.)	30.00

Hence, the installation of suitable deep therapy apparatus, including the overhead system of wires and conductors, requires an expenditure of from six thousand to seven thousand dollars for this purpose.

Radiographic Subdivision

1	150 K. V. radiographic Roentgen generator, at an approximate cost of	$2,000.00
1	Filament equipment, approximate cost	100.00
1	Micro timer, approximate cost	205.00
1	Magnetic sphere gap, approximate cost	157.00
1	Radiographic horizontal table, with tube stand on rail attachment, approximate cost	540.00
1	Bucky diaphragm for above table, approximate cost	300.00
1	Plate changer, approximate cost	650.00
1	Coolidge tube, approximate cost	125.00
	Approximate total	$4,077.00

Note: To the above mentioned approximate cost, should be added about ten per cent for installation and accessories.

The Fluoroscopic Subdivision

1	Fluoroscopic Roentgen generator, approximate cost	$700.00
1	Control stand, with filament regulator and potential indicator, approximate cost	150.00
1	Vertical fluoroscope, approximate cost	545.00
2	Fluoroscopic screens, 12"x16", approximate cost	90.00
1	Fluoroscopic table, including tube stand on rail attachment, 2 plate, film and cassette holders approximate cost	1,400.00
1	Micro timer, approximate cost	205.00
2	Foot switches, approximate cost	59.00
1	Barium mixer, approximate cost	20.00
3	Coolidge tubes, approximate cost	375.00
	An apparatus for taking serial gastric pictures is sometimes added, at an approximate cost of	250.00
	Approximate total	$3,794.00

Approximately ten per cent may be added to the above sum for accessories.

For the proper equipment of a fluoroscopic section, therefore, approximately the same amount of money is required as for the radiographic subdivision, namely, $4,000.00 to $4,500.00.

Cystoscopic and Bronchoscopic Subdivisions

1	Radiographic and fluoroscopic Roentgen generator, with control stand, approximate cost	$700.00
1	Filament equipment, approximate cost	50.00
1	Potential indicator, approximate cost	75.00
1	Cystoscopic table with tube stand, lead glass bowl for radiator type tubes, and with flat Bucky diaphragm, approximate cost	820.00
1	Coolidge tube, approximate cost	125.00
1	Bronchoscopic table, with vertical and horizontal x-ray units, two x-ray tubes, and two foot switches, approximate cost	1,600.00
	with the addition of, approximately, ten per cent for a mahogany cabinet and other necessary accessories.	

To equip this type of room will require, therefore, from $3,500.00 to $3,700.00. To purchase a stereoscopic and illuminating box for the plate-reading room will require from $350 to $400.

The dental x-ray room is not a necessity, unless the work of the radiographic subdivision is so pressing that time cannot be spared to take dental films. The dental x-ray unit will cost from eight hundred to ten hundred dollars, with an average of nine hundred and fifty, and the dental x-ray

chair will require an expenditure of about one hundred and fifty dollars.

The dark room equipment, including a developing tank, film drying cabinet, film hangers, and loading bin, should cost about four hundred dollars. In addition to this expenditure, cassettes with double screens, of 14x17 inch, 11x14 inch, 10x12 inch and 8x10 inch sizes must be purchased. These vary in price from, approximately, $65.00 each, in the larger size, to, approximately, $30.00 in the 8x10 inch size.

Financial Consideration

It would seem appropriate, at this juncture, to make some statement, in regard to the finances of the x-ray division. An expenditure of, at least, $10,000.00 would seem to be the basic amount required completely to equip an x-ray division, omitting provisions for deep therapy. This sum can be greatly augmented, or can be somewhat reduced, dependent upon the local situation.

There are two general systems of conducting the financial side of this division. The one most frequently employed appears to be the payment of a moderate salary to the director of the x-ray laboratory and allowing him to treat and exact from occupants of private rooms and persons coming from without the hospital, a certain fee a definite percentage of which is to be retained by the director and the remaining sum turned over to the hospital. This percentage varies in proportion to the amount of salary paid. On this basis, not infrequently the x-ray director receives a generous return for his services, the hospital not suffering in any way from this system.

Again, where the unit system of charges is in vogue, the x-ray director is paid a straight salary, and the cost of conducting the division is prorated among the patients treated within the hospital.

Merits of Charge System

The reader is referred to the July, 1926, issue of THE MODERN HOSPITAL, p. 45, for a complete discussion of the merits of the unit charge and the special charge systems.

It is not possible to set down here any system of charges for x-ray work in general use throughout the country. However, it may be of interest to the readers of this magazine to learn of the charges that have been agreed upon by the hospital association of one of our larger municipalities. These charges cover the x-ray work done upon compensation cases. Furthermore, this system of charges was determined upon after consultation of the representatives of six large insurance carriers, and a committee, representing an association, comprising sixty-seven hospitals.

X-ray Charges	Recommended Rates
Abdomen and chest	$15.00
Ankle	10.00
Arm, elbow, wrist	10.00
Foot	5.00
Foreign bodies	10.00
Fluoroscopic	15.00
Gastrointestinal	40.00
Hand	5.00
Jaw	10.00
Knee	10.00
Kidney and bladder	20.00
Leg	10.00
Nasal bones	10.00
Pelvis	20.00
Ribs	10.00
Sinuses	15.00
Shoulder	10.00
Skull	15.00
Special localization	15.00
Spine	20.00
Tooth	5.00
Teeth	10.00
Thigh and hip	10.00

It may be stated that these charges do not represent the charges to in-patients under treatment on the hospitals which agreed upon this schedule as suitable for compensation cases. Little has been done, however, by the hospital field to bring the services of the x-ray laboratory within the reach of patients who have not been hospitalized and are possessed of but moderate means. It would be a fine thing if some hospital could be the pioneer in inaugurating an x-ray out-patient clinic, to be conducted at an expense to the patient of, let us say, cost, plus ten per cent, to pay for overhead, wear and tear on equipment and such expenses.

The Functioning of This Division

One of the chief difficulties that is being encountered by the directors of x-ray divisions everywhere, is that of having patients, who are referred to them for study, properly prepared, and to secure a protocol of their records, which will enable them intelligently to report on the x-ray findings of their condition.

Definite hours are usually set for patients to be sent to the x-ray division. A request form, which sometimes is of the history-sheet size—8½x11 inches—or of smaller size, and printed on a card, is employed. On this form is printed the name of the patient, with some statement in regard to his occupation, the organs to be examined, his clinical diagnosis, the presence or absence of fever, and a synopsis of his history, with a brief summary of his laboratory studies, such as his Wassermann reaction. Instead of these facts being furnished on a request card, they are on the patient's ward record which accompanies him to the x-ray division.

Clear-cut general rules in regard to the preparation of the patient for special studies are found necessary. This technique varies, however, in accordance with the individual desires and beliefs of the director of the x-ray division. Below are set down some of the general rules usually adopted:

Preparation of Patients

For all examinations of bones or of abdominal organs, patients must be thoroughly purged. Salines should not be used. A dose of from four to six drams of pulv. glycyrrhizae comp. is often employed for this purpose; no enema is given. It is important that the drug shall have been effectual. If not, it should be repeated.

An exception to the above is the rule that no purgative is to be given a patient referred for an examination of the stomach. It is important that such patients receive no breakfast or dinner. An opaque mixture is to be administered six hours previous to examination. This meal can be obtained from the laboratory at 8 a. m.

Patients, who are to be studied by means of a barium enema, must be thoroughly purged, and receive two soapsuds enemas, fifteen minutes apart, one hour before being sent to the x-ray division. No breakfast or dinner shall be permitted.

For a gall-bladder study, by means of the oral administration of tetra-iodophenophthalein, patients must be thoroughly purged the day preceding that upon which the dye is to be administered. On this day dinner should be rich in fat. The following day, dinner should be fat-free. The drug is administered at 9 p. m., two five-grain capsules, or four two-and-one-half-grain capsules, being given every fifteen minutes, until all are taken. A wine glassful of water is taken after each dose. Seven to ten five-grain, or fifteen to twenty two-and-one-half-grain capsules, dependent largely upon the habitus of the patient, are sufficient.

During the administration, and as much as possible during the night before examination, the patient should lie on the right side.

All dental cases must be referred to the dental department. The dentist will specify how much of the patient's denture it is desirable to have filmed.

FILM BEING USED AS PUBLICITY

A one-reel film has been made of the activities of the James Whitcomb Riley Hospital for Children, Indianapolis, Ind., to be used as instructive entertainment by lodges, clubs and other groups. Two nurses from the Robert W. Long Hospital, Indianapolis, are using one print of the film in field service work.

MINIMUM STANDARDS FOR CLINICAL LABORATORIES APPROVED

In accordance with the minimum standard requirements that have been set for the various services of the hospital, by the American College of Surgeons, the following minimum standard requirements for clinical laboratories in approved hospitals have been approved by the board of regents of the college.

1. That the director of the clinical laboratory shall be a graduate of an acceptable college or university of recognized standing, and shall have had adequate training in clinical pathology or allied subject. In case the director is not a physician there shall be attached to the laboratory a graduate in medicine competent to render diagnoses on pathological conditions.
2. That clinical laboratories shall be prepared to perform satisfactory work in: (a) pathologic anatomy, gross and microscopic; (b) bacteriology and parasitology; (c) serology; (d) hematology; (e) chemical and morphologic examinations of other body fluids, exudates, transudates, and excreta.
3. That all tissues received at operation shall be sent to the laboratory for examination and reports rendered thereon.
4. That a readily available copy of all reports shall be filed in the laboratory and one with the patient's record. In pathologic anatomy there shall be in the laboratory a cross index of, at least, the name of the patient, of the hospital or laboratory number of the patient, and of the lesion or organ. There shall be preserved also for at least three years, either section, imbedded tissue, or gross tissue from each case from which tissue showing pathologic change is removed.
5. That a uniform system of charges for laboratory work shall be enforced.
6. That the clinical pathologist shall attend the monthly staff conference of the hospital.

USING PUBLIC PARKS FOR CONVALESCENT HOMES

For the past four years the Netherlands has been working on a plan for convalescent hospitals that has developed into a distinct type. In May, 1923, the Dutch Red Cross established a convalescent home in a corner of a public park in Amsterdam. Later that year this organization established another one on an old man-of-war. Now they have an association of convalescent homes in public parks and several such institutions have been established.

The first one consists of a cheap wooden hut built along the lines of the American lean-to cottage for housing tuberculosis patients. It is open on one side and has a veranda and contains facilities for the housing of thirty patients. Besides the patient's bed and sitting space it contains an office, a kitchen, cloak room, bathroom and isolation cubicle. The space is fenced off from the other park space by shrubbery. Patients come in the morning and remain throughout the day and are supplied with the food and care that their condition demands. This entails a required amount of rest and exposure to sunlight for a certain period, a similar routine to that of the preventorium in this country. The home is visited daily by a physician and in addition there is the full time staff consisting of a nurse, a kitchen maid and one other attendant.

When the home is made available for the children of school age, a teacher conducts open air classes.

Editorials

A RAINY-DAY CLUB

MUCH has been said about the urgent need for the hospital to undertake structural or administrative steps that more economically, yet with no loss of efficiency, will provide for those of moderate means.

No informed person can deny the existence of such a problem. The question naturally arises in the minds of thoughtful persons, however, as to whether this worthy and self-respecting class of our citizenry is doing all that is possible to foresee a need for the services of the hospital, and to prepare for this eventuality.

It has been observed that in urban communities from two to three per cent of the population is disabled by sickness at one time. The number requiring, and desiring hospital care varies widely with local conditions, but according to several careful community surveys, notably in Cleveland and Boston, this number ranges from ten to twenty-four per cent of those who are incapacitated by disease. Hence, in urban communities, while but two or three persons out of every hundred are at any one time likely to be prevented by illness from earning a livelihood, and although but one-tenth to one-fourth of this number requires hospitalization, this morbidity incidence is not so low as to negative the wisdom of financial preparation for this event.

The Christmas clubs, which are conducted by banks in almost every locality, are the cause of many millions of dollars being saved to provide for the practical manifestation of the kindly spirit of Yuletide. Without doubt, savings banks, which gladly open an account on the deposit of from one cent to one dollar, are productive of much good in promoting thrift among all classes of people.

But why not a fund, which is slowly but no less certainly accumulated, to provide for adequate medical and hospital care when the wage earner, the housewife, the son or daughter is stricken with a protracted or even brief illness? Is the citizen of moderate means really doing his share to solve the problem of bringing the services of skilled physicians and efficient hospitals within his economic reach?

Surely in the prenatal clinic, which sees the patient early in her pregnancy, the question of financial preparation for the child's coming should be as certainly stressed as provision for the presence, at the proper time, of the layette.

Would it not be a fine forward step for banks and saving societies to inaugurate "rainy-day clubs" for such an exigency as this? If it were not thought best to create a new fund for this purpose, should not this need for saving be given more publicity by financial institutions and insurance companies everywhere?

THE MODERN HOSPITAL believes that one of the pressing institutional problems of the day is the proper hospital care of those of moderate means, but it also is of the opinion that the members of this group should not passively await the solution of this problem by others, but should actively endeavor to do their part to prepare to meet the distressing, yet almost equally inevitable, misfortune of personal or family illness when it comes.

A METROPOLITAN ADMISSION BUREAU

THE article opening this issue of the magazine describes a central hospital admission bureau operating in several large European cities. Would such a plan be useful in this country?

If the traditional German genius for thoroughness and efficiency can administer a central bureau through which are cleared all admissions for all hospitals in a city of four million people, and if Dutch persistency can carry a similar plan through in a city of a million people, could American genius for organization achieve the same end? The bureaus in these foreign cities do not, of course, control the admission policies of the individual hospitals, but centralize daily the information regarding the number and types of beds available at these institutions, so that patients seeking admission can be referred to the most appropriate vacancy anywhere throughout the whole hospital system in the city.

Since one of the frequent criticisms brought against our hospitals is that they fail to utilize their available beds to a sufficiently large percentage of their theoretical capacity, some pooling of information of this kind for a large city might serve to reduce this criticism by increasing the proportion of used beds. Might it not also serve a valuable purpose in times of emergency, such as an epidemic or other disaster?

It may be questionable whether the benefits to be derived from a central admission bureau in occasional emergencies would justify the labor of setting up the organization on a permanent basis. If used only in emergencies, the machinery would be likely to creak badly when suddenly started. Americans have so much the habit of quick and effective action on organization matters when

emergencies occur or threaten, that perhaps such needs would be fairly well cared for in large cities without setting up nominally permanent but rarely used machinery.

On the other hand, is there not much to be said in favor of any plan that will tend toward closer cooperation among the many small and often isolated units that make up the hospital system of a typical American city of half a million or more population. The mere effort to organize a central admission bureau, even if it were supposed to be called upon only for emergencies, might perhaps serve as a step toward better mutual acquaintance among the hospitals of a community and promote coordination in other ways that will be beneficial to all.

Might it not be well to urge health and hospital interests in our larger cities to take up this idea through some central cooperative body? Merely to bring together in some systematic way the hospital executives of the community for the discussion of this subject might, in those cities that are not already provided with hospital councils, be a useful step toward cooperative work in many directions.

THROUGH THE PATIENT'S EYES

TO SEE our hospital selves as "ithers see us," while, perhaps, sometimes startling would always be both personally illuminating and beneficial to the institution that we serve.

This self-inspection does not refer wholly to the personal traits of any individual, but to the habits, attributes and customs of the hospital itself. To become rutted is fatal. To live continually too near to the hospital's daily work is equally fatal to progress.

"Why," one patient asked, "is it necessary to wake me so early in the morning, when I have nothing to do but be ready for the ten o'clock diathermy treatment?" Such questions are difficult to answer, unless one hazards the statement that such is the hospital's rule—that temperatures and breakfasts must be finished by an early hour. To attempt to answer why another patient was wakened to take his medicine, which later turned out to be a sleeping potion, would be just as difficult.

Is there too much routine in the work of our hospitals? Is the individuality of each patient being considered, is so far as possible, in regard to each detail of his hospital life, which may range from food to occupational therapy? The patient cannot understand that he is unreasonable when he insists that a certain medicine is poison to him. Nor does he wish to be intentionally caustic when the expected happens after his remonstrances have been overruled.

It would be obviously impracticable to set up a separate routine for each patient, and yet could not the individual peculiarities of the sick man be just a little more a matter of serious consideration?

It would be folly of the grossest sort to suggest that the desires of the patient be seriously consulted in matters that concern the progress of his diagnosis or treatment. On the other hand, accession to many of the requests of the patient, which, while without the usual routine, are in reality trifling, often only serves to speed convalescence.

TALKING IT OVER

HAVE you ever noticed the regularity with which the radio announcer requests the comments of the members of his invisible audience on the merits of musical and other programs broadcast from his station? One would judge by the intonation and repetition of these requests that postcard comments were a real recompense for the artistic effort.

Does the hospital often enough broadcast its desire to know the reaction of the public it serves, as to the measure of success that results from its efforts?

Some institutions have a box into which visitors are asked to drop written suggestions as to steps that they believe might better the service of the hospital in one way or another.

Such a practice often serves two purposes, the not infrequent receipt of useful and practical hints as to the betterment of hospital procedures, and the fixing a little more firmly in the minds of the public the willingness and desire of the hospital to extend its services to all who need them.

* * *

THE *Wall Street Journal* says that "easy payments" are in the same class with "painless extractions." This is a piece of wisdom that should be displayed in red on every hospital bulletin. One of the banes that poisons the pleasant existence of hospital superintendents is the importunities of the "dollar-down" houses. It does no good to answer that hospital executives are not in the collection business. It is well-nigh futile to warn employees; the radio fan, the phonograph lizard, the flivver worm and all that ilk still weave their snares. Discharge merely replaces one installmenter by another. Oh, for an epidemic of thrift!

* * *

MENTALLY, most of us lead a hand-to-mouth existence. We are so busy spending the gold of our minds that we do not take time to put anything back, and by and by we arrive at the point where the balance sheet of our brains shows an O. D. opposite the terminal figures. In other words, we have drawn on our reserves until there is an overdraft and we are working on a negative balance. There is only one way in which this can be built up and that is by contact with other minds. This is the real reason, or at least it should be, why we attend society

meetings, visit other hospitals and, above all, why we read.

A good journal, an inspiring book or a quiet talk with someone who has something to impart will do much to make up the losses that we constantly undergo through our contacts with the sick and those who labor for their relief. Even so short a time as fifteen minutes, if employed each day in reading a really good book, is a wonderful prophylactic against mental overdrafts. This was Osler's idea when he proposed a bedside library.

* * *

THE man who was never criticized said, did and was nothing, and he was criticized for that. He went through life fearing what people would say; he imagined that he could slip through his day's work successfully because he avoided adverse attention; he was a human rabbit who cowered in the bushes or ran away rather than to face danger with uncovered fangs and bristling back. Such rimless zeroes never get anywhere, never do anything, never change the world for better or for worse. Their puny souls never climb the rugged heights to victory, there to breathe deep the satisfying atmosphere of accomplishment. The man who said, "The public be damned" was a better citizen and did more for that same public than he whose fearful soul trembled at the slightest breath of disapproval. Goethe said, "When I hear the dogs barking, I know I am traveling." Carping critics make the finest music to which the resolute can march.

* * *

THE *London Daily Mirror* says that a farmer told the druggist, "Now be sure an' write plain on them bottles which is for the Jersey cow and which is for my wife. I don't want nothin' to 'appen to that Jersey cow." Isn't this a thought that we could apply to the labeling of dispensary prescriptions? The cow now looms so large in public health that we can't afford to have anything "'appen" to her.

* * *

STEADFASTNESS is a splendid quality but there are times when, at base, it is sheer obstinacy. An enormous number of the things on which we focus our attention are really unimportant, yet we are apt to harry our souls over them and indulge in self-approbation because we are unyielding to them. A sense of proportion, a realization of relative values, would prevent this, but we are all prone to mistake the shadow for the substance and to regard with suspicion anything that deviates from our crystallized standards. There is a mean course between this and happy-go-luckiness that keeps the ship of character headed in the right general direction and is far more comfortable to follow. In the field of hospital administration we can't be too unyielding if we are to accomplish the big potentialities.

* * *

WHAT is a thought—a chemical reaction, an electric spark, a divine spirit? Since the dawn of his existence, man has asked this question and today it is still unanswered. Yet, it is the ability to take thought that distinguishes him "from the beast that perisheth," which has empowered him to harness earth and fire and water, and to impose his will upon the wind, the tides and the stubborn forces of Nature. One thinking man or woman may set loose a thought that shall be immortal and hence for all time shall influence all who encounter it. It is the discoverer of truth—that one absolutely indestructible thing upon the earth; it measures the heat of distant stars and forecasts the procession of the planets; it places a yardstick upon the globe and the distant suns with equal facility and it solves the mysteries of life itself.

"No man by taking thought can add a cubit to his stature," but he can add to his mental breadth and to the welfare of his neighbor. To him who thinks, all things are possible and to him who thinks and works, nothing shall be denied. How wonderful is this gift of thought. It enables man to cast his voice across the realm of space and there indelibly to record it, to transport his body to the uttermost corners of the earth, to the depths of the sea and the heights of the air. It is the conqueror of disease, the alleviator of pain and the sure weapon of the weak. It is the devinest gift to man.

* * *

THE woman who tells her husband how to drive the car isn't the only person who drives from the back seat. All of us so earnestly love ourselves that we have to be careful that we do not undertake to guide the lives of others. One of the lessons that age brings is that no person can successfully live another's life, yet how many of us are constantly telling those about us not to do this, to do that, to avoid this or to take care of that. This doesn't do much good. Most people have to learn through bitter experience and, after all, it may not be a bitter experience. It does a person good to make a mistake now and then, and while we would like to save those we love from hurt or embarrassment and to give them the benefit of our experience, there are few indeed who can or do profit from it. Let's not drive from the back seat.

* * *

A PESSIMIST is a person who believes that the only thing we got out of the war is prohibition. He forgets the crime wave, bobbed hair, short skirts and uncollectable foreign debts. Seriously, the hospital and allied fields benefited tremendously by it. Never have they had such a stimulus; nothing ever happened that drove them forward to such an extent. It brought public health into its own. Social service received a tremendous impetus. Community welfare was put upon a scientific basis. Practical patriotism has reached a useful plane. Yes, "these dead have not died in vain."

* * *

A CIRCLE can be said to be composed of a great number of minute points, equidistant from another—a fixed central point. All of these are vitally necessary to the completeness of the whole, yet no two occupy the same position, and many may appear to be in no fixed relationship, as to location or function, to the others. Such is the makeup of the personalities that constitute the working force of the hospital. Each is doing his or her part to surround the geometric center, the patient, with an efficient wall of scientific treatment; to guard and protect him from harm; and yet each, with contrasting personality and traits, may appear to be moving in an opposite direction from his co-worker.

As long as the hospital circle is maintained geometrically perfect, the patient is safe, but when tangents of personal interest—of friction as a result of misunderstandings or jealousies—develop, the circle of service is broken.

The Modern Hospital Reading Course: Lesson IV

HOW HOSPITALS ARE FINANCED

By E. H. Lewinski-Corwin, Ph.D., Director, Hospital Information and Service Bureau, United Hospital Fund,
New York

ASIDE from army and navy hospitals, and those for war veterans, sailors, Indians, lepers, and others maintained by the Federal Government, and the special hospitals for the mentally ill and the tuberculous maintained by the various states, the bulk of general hospitalization in this country falls upon private benevolence, the municipalities or counties.

In the United States Census report on "Hospitals and Dispensaries," published in 1923, the distribution of hospitals by "auspices under which hospitals were conducted on January 1, 1923," is given in terms of institutions and not in terms of beds. The distribution is, therefore, meaningless insofar as information is concerned relative to the extent of hospital provision by each major group and relative to the investment in each type of hospital. According to this census report, of the 4,949 hospitals reporting

289 were conducted under Federal auspices
93 were conducted under state auspices
186 were conducted under county auspices
268 were conducted under city auspices
812 were conducted under religious auspices
1,672 were conducted under private corporation or association auspices
1,143 were conducted under individual auspices
121 were conducted under industrial auspices
182 were conducted under partnership auspices
183 were conducted under other kinds of auspices

In terms of percentages, the number of hospitals conducted under governmental auspices (Federal, state, county or city) constituted 16.9 per cent of all hospitals reporting to the census authorities on this point of their inquiry; the hospitals maintained by religious bodies constituted 16.4 per cent of the total; those conducted by private corporations or associations 33.8 per cent; the remainder were hospitals under individual or partnership auspices, and 2.4 per cent was industrial hospitals.

In addition to the proprietary hospitals operated by individuals for profit, 10.5 per cent of the hospitals conducted by corporations or associations was likewise operated on the same basis. Of the partnership hospitals, however, only 4.5 per cent was reported as conducted for gain.

On the basis of the figures compiled by the American Medical Association, the approximate ratios of hospital beds in this country in relation to auspices are as follows:

Federal	7.6 per cent
State	39.6 per cent
County	7.1 per cent
City	8.6 per cent
Independent associations	14.6 per cent
Denominational	13.5 per cent
Individual and partnership	7.6 per cent
Industrial	.8 per cent
Fraternal	.6 per cent
	100.0 per cent

The capital as well as the maintenance expenses for the governmental hospitals of all types are obtained from the proceeds of bonds and tax funds; the proprietary and industrial hospitals are financed by private capital. It is only with the strictly community hospitals, under independent corporate or denominational management, that we are concerned when we discuss the financing of the hospital. These hospitals have a combined bed capacity of approximately 235,000 or less than one-third of the total available hospital beds of the country, and are almost invariably located in our urban centers. In view of the fact that their combined annual utilization is, on the average about 70 per cent, it may be assumed that, for purposes of rough calculation that their annual maintenance expense per bed is only $1,000. On this assumption, the total cost of maintaining the private or voluntary community hospitals of this country is, in round figures, $235,000,000.

This sum is met to the extent of 70 per cent from patients' earnings. This estimate is based on figures published by the United Hospital Fund of New York, the Department of Welfare of Pennsylvania and a study of a group of thirty-three hospitals, recently made by the author, published in the March issue of THE MODERN HOSPITAL. The amounts derived from the proceeds of endowments, interest and rentals vary considerably. In the hospitals of the United Hospital Fund this source constitutes 13 per cent of the sum required for maintenance expenses. In Pennsylvania, however, only 5.3 per cent of the total maintenance cost comes from this source.

If we assume that the private hospitals of the

country obtain from the proceeds of endowments 10 per cent of their entire income, then only 20 per cent would have to be raised from community donations in one form or another to make up the aggregate deficit. In other words, the private community hospitals of the country need annually about $40,000,000 to supplement their principal sources of revenue. This amount of $40,000,000 may be considered as a fixed sum required annually.

Cost of New Construction

In addition, there is need of vast sums to make possible new hospital construction. The annual accretions to our hospital resources are considerable. During the past few years hospital construction constituted about 7 per cent of the entire amount of building reported for the country. According to Dr. C. C. Burlingame, executive officer, Joint Administrative Board, New York, the cost of the new hospital construction in 1926 amounted to $309,000,000 and the forecast for 1927 by the *Architectural Forum* calls for $272,947,500 for new outlays in hospital building. If only one-third of new hospital construction annually were in connection with private community hospitals, the yearly outlay for hospital buildings (aside from land and equipment) would be in the neighborhood of $100,000,000. The land and equipment raise this figure another 20 per cent at least, making the annual cost of new hospitals approximately one hundred and twenty millions of dollars. This sum varies, of course, from year to year.

How are the vast sums required annually to meet the $40,000,000 hospital maintenance deficit raised? And how are the still greater sums raised that are required for new hospital capital? Before I answer these two queries, I shall touch upon the question of how much social capital there is available generally for purposes of charity. In this, I shall utilize the figures of Paul and Dorothy Douglas, as given in their essay, "What Can a Man Afford?" [1]

Unlike our practice in public health work, where the policy of the voluntary agencies is to blaze the trail for new types of service, and when the value of these has been demonstrated, to foist them on government agencies (state, county, or municipal), the American community regards hospitalization and relief work a part of the responsibility of certain groups in the community. How much can and should each member of the community give toward this and other accepted philanthropies and how much has society, as a whole, for these purposes?

[1] Supplement No. 2 to the American Economic Review, December, 1921.

In 1921 our national income, after deduction of Federal, state and local taxes, amounted to fifty-three billions of dollars.[1] The amount necessary for investment in new capital and replacements was estimated at six billions of dollars, leaving forty-seven billions for consumptive purposes. The minimum subsistence basis of our population calls for thirty billions of dollars, leaving seventeen billions as the surplus above taxes, investments and the bare necessities of life. If $1,700,000,000 be a correct estimate of all the charitable needs of the country, it would constitute exactly 10 per cent of the so-called social surplus and 3.2 per cent of the entire national income after the deduction of taxes. Not everyone could or should give 3.2 per cent of his net income to purposes of philanthropy. The table reproduced below is the scale recommended in the above mentioned essay for donations and investments in relation to family income.

Theoretical Scale of Donations and Investments for Indicated Incomes*

Family Income	Percentage to be Given to Charity	Percentage to be Used for Investment	Family Income	Percentage to be Given to Charity	Percentage to be Used for Investment
$1,250	.1	...	$ 7,500	4.1	11.6
1,350	.3	...	8,500	4.3	12.9
1,450	.4	...	9,500	4.6	14.5
1,550	.5	.02	10,500	4.8	16.0
1,650	.6	.07	11,500	4.9	17.4
1,750	.7	.12	12,500	5.0	18.7
1,850	.7	.16	13,500	5.1	19.7
1,950	.8	.2	14,500	5.1	20.5
2,050	.9	.3	17,500	6.4	21.3
2,150	1.1	.4	22,500	7.7	21.9
2,250	1.3	.6	27,500	8.5	21.8
2,350	1.4	.7	35,000	12.6	22.4
2,450	1.5	.9	45,000	19.0	23.2
2,550	1.7	1.1	55,000	23.8	23.8
2,650	1.9	1.4	65,000	25.5	25.5
2,750	2.0	1.7	75,000	26.4	26.4
2,850	2.1	2.0	85,000	26.9	26.9
2,950	2.1	2.3	95,000	27.2	27.2
3,050	2.2	2.6	125,000	27.0	27.0
3,150	2.2	2.9	172,000	26.2	26.2
3,250	2.3	3.2	222,000	25.3	25.3
3,350	2.3	3.5	273,000	24.5	24.5
3,450	2.4	3.7	344,000	23.7	23.7
3,550	2.4	4.0	411,000	23.0	23.0
3,650	2.5	4.3	525,000	22.2	22.2
3,750	2.6	4.6	777,000	21.2	21.2
3,850	2.6	4.9	1,200,000	20.4	20.4
3,950	2.7	5.2	1,720,000	19.9	19.9
4,500	3.0	6.7	2,410,000	19.6	19.6
5,500	3.6	8.9	3,340,000	19.4	19.4
6,500	3.9	10.6	8,100,000	19.0	19.0

*Devised by Paul and Dorothy Douglas.

In the table, the rates for both charities and investments reach the highest relative point for each purpose at the income group of $95,000. The subsequent decline is due to the rapidly increasing proportion of Federal income taxation. This calculation was made in 1921; since that time the Federal taxation has been modified and if a new table were calculated with this in view probably a

[1] According to the National Bureau for Economic Research the national income for 1926 has increased twenty-seven billions of dollars in comparison with that of 1921.

different maximum point for investments and charities would have been reached. Aside from the academic part of this discussion, the fact remains that in the interest of good citizenship and a secure foundation for social community investment, there is need for a more democratic basis of giving toward the two billions of dollars needed for benevolent purposes of all kinds, inclusive of gifts to colleges and universities, for scholarships and research, for religious and missionary purposes, fine arts, foreign relief, organized play and recreation, treatment of disease and the promotion of health, the care of children, charitable relief and other causes. To meet their maintenance deficit the private hospitals claim 2 per cent of the available philanthropic fund, and 6 per cent of the total for new construction or capital investment.

The hospital current income, aside from earnings and investments, comes from donations, bazaars and other entertainments, and in an almost infinitesimal degree from the sale of grease and other waste products. The donations must be solicited by those interested in the hospital or by impersonal mail appeals, usually of a sentimental character. With the growth of philanthropic causes and the concomitant multiplicity of appeals, there has grown up the conviction that this method of securing funds on the part of each agency is socially wasteful, increasingly ineffective and that under it only a small fraction of the community is bearing the burden of all philanthropic endeavor.

Joint Appeal for Charities

The method of joint appeal for all the principal charities suggested itself. Although it was started in some cities prior to the War, notably in Elmira, N. Y., Cleveland and Denver, it received its great impetus during the War period. In May, 1915, a committee of the American Association for Organizing Charity was appointed to study the problem of financial federations in view of the numerous requests received from many communities concerning the advisability and practicability of such collective methods of raising funds. In 1917 a report on "Financial Federations" was published, based on the observations and data collected by Mr. F. S. Hall, Russell Sage Foundation.

The committee, headed by W. Frank Persons, was guarded in its conclusions, the movement, at that time, being in its infancy. Several of the federations have been abandoned; in some instances the organization was badly set up or the federation suffered from inexperienced leadership. The committee discussed the effects of granting immunity from solicitation, the use of whirlwind campaigns, and the encouragement of undesignated giving not only from the point of view of financial results, but also with reference to the education of the community and the effect such methods of money raising may ultimately have on the standards of social work and on new forms of philanthropic effort in a community. The general deduction from this study could be summarized in the phrase "Go Slowly." It is worth while even now to quote the concluding paragraph of the committee's report:

Abolition of Competition

"The abolition of competition in the financing of social organizations, for the sake of avoiding its waste, is as attractive a proposition in theory and apparently as logical as the abolition of competition in business, which is championed in part on the same ground. But in the social field, whether we agree or not regarding the economic field, there are spiritual and psychological factors that leave doubt as to the ultimate advantage to be derived from giving up a plan of work that has behind it the experience of more than one generation of social workers, in order to adopt one which, according to many who are in a position to know, is still in its experimental stage."

Financial federations, sometimes known as welfare federations and more commonly as community chests or community funds, spurred on by the experience of their precursors, the war chests, have continued to multiply. Now over two hundred American cities have adopted this method of cooperative collection of funds for philanthropic purposes. It is claimed that the popularity and success of the community chest idea have been due to the fact that by this method of social financing the cost of raising funds has been reduced considerably (it amounts on the average to about 5 per cent of the collections), that it has increased the revenue for social work and has aroused a wider interest in community betterment.[1] It has democratized philanthropy, as evidenced by the considerable contributions by small givers. The following figures are taken from the financial analyses of contributions to chests, published by the American Association for Community Organization and reproduced in the appendix to the book of Procter and Schuck, referred to in the footnote.

It is evident that in Cleveland and Detroit the popularity of the community chest is widespread. In Cleveland 451,504 persons of a total of 912,502 population or a little less than half of the city population participate by giving small donations. In Detroit and Milwaukee one-fifth of the population

[1] Procter, A. W., and Shuck, A. A., "The Financing of Social Work," A. W. Shaw Company, Chicago, 1926.

Analysis of Contributions in Community Chests in 1925 Showing Number of Contributors by Grades

City	Population	Total Amount Pledged	$5,000 and Over	$1,000 $4,999	$500 $999	$250 $499	$100 $249	$50 to $99	$25 to $49	$10 to $24	$5 to $9.99	All under $5
Philadelphia ...	1,951,076	$2,920,154	93	403	448	630	2,409	2,037	3,570	.....	27,910	86,067
Detroit	995,668	2,678,700	73	202	420	370	1,672	1,606	3,177	.....	.....	206,433
Cleveland	912,502	4,285,908	102	457	541	956	2,966	.....	.....	.....	.....	421,504
Milwaukee	492,087	763,160	9	107	124	167	752	771	1,756	.....	13,879	94,906
Minneapolis	417,280	1,042,139	20	133	155	199	818	1,053	2,013	8,508	12,907	37,753
Denver	272,031	731,360	10	97	112	166	701	695	1,426	3,965	5,507	35,921
St. Paul	213,946	614,385	16	71	70	119	427	592	1,121	3,162	4,478	49,145

contributes in a similar manner and so on to a greater or lesser extent in other communities. To the private hospitals, the community chest has become a matter of importance, but perhaps to a lesser extent than it is to other social agencies seeking support for its activities, for the hospital is dependent on voluntary contributions only to a comparatively small fraction of its maintenance costs.

Some hospitals resent the control that has been established, to a greater or less degree, by the chest authorities in demanding budgetary accounting, others recognize it as a desirable community procedure. In some cities the hospitals claim that they receive less under joint financing than before, or that the distribution of funds is not on a proper basis, in others the hospital administrators have their requests met so liberally, that they find themselves under less pressure to get from the patients all that "the traffic will bear."

Discussing this subject at the 1925 meeting of the American Hospital Association, Frank E. Chapman, director, Mount Sinai Hospital, Cleveland, emphasized the fact that "before the advent of community funds, the ratio of the earned to the subsidized dollar was higher than with the advent of the community funds. As the community funds became an accepted practice in the hospital, the percentage of the unearned income went up." [1] The studies that are being made of the effect of cooperative financing of hospitals will undoubtedly bring out many interesting facts and significant tendencies.

In very few communities has an attempt been made to raise, cooperatively, funds for capital as distinct from maintenance purposes. This is a much more difficult field in which to secure cooperation, but it seems reasonable to expect that before being launched projects involving large investments of capital should receive intelligent cooperative study on the part of responsible and representative civic agencies, and that the time of launching the various projects should be determined so that there will be no competition or rivalry in "drives."

[1] Transactions of the American Hospital Association, Vol. XXVII, 1925, p. 535.

The extent to which communities respond to requests for contributions for new hospital projects has not as yet received much study. At my request a firm of hospital campaign organizers prepared tabulations of contributions in several widely different types of communities. These showed contributions varying from $10 to $55 per capita of population depending on the type of community. In Syracuse, N. Y., with a population of about 200,000, a campaign was recently conducted for two and one-half million dollars for one of the six hospitals of the community. The contributions secured in this campaign are presented in the following table, and are significant of the generosity of the several economic strata.

Grade of Contributions	Number of Contributors	Aggregate Amount
From $1.00 to $1,000 ...	11,518	$608,000
From $1,000 to $5,000....	152	373,800
From $5,000 to $10,000....	51	345,000
From $10,000 to $25,000....	22	335,000
From $25,000 to $50,000....	9	385,000
Over $50,000	3	331,000

In the continental European countries, there are no problems of financing hospitals, aside from providing funds by the public exchequer. The hospitals are either maintained by the state or municipality and the private hospitals are of the character of sanatoriums or nursing homes.

The King Edward's Hospital Fund for London is the largest fund in the city for hospital purposes. The money raised is for both maintenance and capital expenditures. The fund has been successful in raising large sums and in exercising community control over the hospital situation. In the antipodes, Australia and New Zealand, all the hospitals are supported from state and local tax proceeds, and, although governed by hospital committees, the hospitals are under government control. In the words of Dr. Malcolm T. MacEachern, in the article, "How New Zealand Conducts Its Hospitals," THE MODERN HOSPITAL, September, 1926, p. 51, "One of the main points of interest in this system is a financial support guaranteed by the government assuring hospitalization for even the poorest citizen of the Dominion. This underlying idea is sound, though we in America cannot wholly subscribe to all the practices connected with the working out of the scheme in New Zealand."

NEWS OF THE MONTH

IMPORTANT BUSINESS TRANSACTED BY A. H. A. TRUSTEES

Much important business was transacted at the meeting of the trustees of the A. H. A., held February 14 at the headquarters, 18 East Division Street, Chicago.

In view of the deficit resulting from the operation of the personnel bureau, the board decided to increase the service fee from 10 per cent of the first month's salary to 25 per cent of the first month's salary. It was also decided to abolish the registration fee. The association does not desire to make a profit from this activity and if the receipts exceed the cost of operation the service fee will be reduced, but it was the concensus of opinion that this work should not be a drain on the resources of the association at a time when the most rigid economy must be exercised.

The establishment of a clinical record division was discussed and the board expressed its interest in this subject and its willingness to inaugurate this work, provided there was a sufficient demand from the field and that a person could be secured whose qualifications would be such as to inspire confidence in hospital authorities desiring such service. The hospitals that desire to have their clinical record systems revised or new systems installed are requested to communicate with the executive officer so that he may obtain some idea of the demand.

It was decided that a study of fire insurance should be made and the president appointed as a special committee the following people: Dr. Joseph C. Doane, medical director and superintendent, Philadelphia General Hospital, Philadelphia, chairman; Richard P. Borden, trustee, Union Hospital, Fall River, Mass.; Alfred C. Meyer, trustee, Michael Reese Hospital, Chicago; Dr. Henry K. Mohler, Jefferson Hospital, Philadelphia, Pa.; and L. D. Wood, General Insurance Agency, Inc., Philadelphia.

A discussion as to the possibilities of an international hospital convention was held, and in order to gather more accurate information as to the wishes of other countries the president appointed the following committee to investigate: Dr. S. S. Goldwater, director, Mount Sinai Hospital, New York, chairman; Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital, Cincinnati, Richard P. Borden, Dr. Joseph C. Doane, E. S. Gilmore, Wesley Memorial Hospital, Chicago, Dr. A. K. Haywood, superintendent, Montreal General Hospital, and Dr. E. H. Lewinski-Corwin, Hospital Information Bureau, New York.

The budget for the calendar year 1927 was carefully considered and passed. The budget amounts to $75,000, and the board further authorized the treasurer to add to the sum of $4,000 now invested in short time notes, the additional sum of $5,000, thus making a total of $9,000 in reserve for the payment of interest on first and second mortgages in case the current income is insufficient to meet this outlay when due in June. It was reported at the meeting that $5,000 had been paid in January on the first mortgage on the building thus reducing it to $55,000. It was the sense of the trustees that another $5,000 should be paid off on the June interest date, and the remaining $50,000 on the first mortgage should be refinanced at a lower interest and allowed to stand. It is then hoped that the bond issue will be paid off expeditiously.

A request from Dr. Joseph B. Howland, superintendent, Peter Bent Brigham Hospital, Boston, delegate from the association to the Committee on Grading of Nursing Schools, for an appropriation to support the work for the year 1927 was favorably considered and a sum of $500 was appropriated.

The board also, by a resolution, approved of the publication of a bulletin by the association, to be issued at regular intervals and to contain such items of current general interest to association members as might be contributed or especially selected. It was also decided that the official program for the association would be contained in the bulletin preceding the convention and that this year advertising would be accepted from such of the exhibitors as may care to take space.

PENNSYLVANIA PROGRAM TO FEATURE FOUR IMPORTANT TOPICS

Four topics of vital interest to hospital administrators are to be discussed at the sessions of the sixth annual conference of the Hospital Association of Pennsylvania, to be held at the Adelphia Hotel, Philadelphia, April 20-22.

The intern problem, laboratory fees, social service and

Dr. Howard E. Bishop.

the out-patient department will be covered in the discussions and papers of the meeting.

According to the announcement of Howard E. Bishop, superintendent, Robert Packer Hospital, Sayre, president of the association, the exhibit of hospital supplies and equipment will be larger than at previous meetings and will contain many new features.

The program will open Wednesday afternoon, April 20, at 2 o'clock, with the address of the president, which will be followed by an address of welcome, to be given by Dr. Wilmer Krusen, director of public health, Philadelphia. Response will be made by Daniel D. Test, superintendent, Pennsylvania Hospital, Philadelphia. The addresses will be followed by reports of trustees and of the various committees.

The address of the evening program, which will open at 8 o'clock, will be given by Josiah H. Penniman, Ph.D., LL.D., president and provost, University of Pennsylvania, Philadelphia, who will be introduced by Dr. Joseph C. Doane, medical director and superintendent, Philadelphia General Hospital, Philadelphia. Thursday morning's program will be taken up largely with the intern problem which will be discussed from various angles, such as the selection of interns, and what is required of the hospital and the intern. The subject of laboratory fees will also be brought up for discussion at this session.

The afternoon session will be featured by two addresses, one by Dr. Theodore B. Appel, secretary of health, Commonwealth of Pennsylvania, Harrisburg, and another by Mrs. E. S. H. McCauley, secretary of welfare, Commonwealth of Pennsylvania, Harrisburg.

The annual banquet of the association will be held Thursday evening at 7 o'clock, with Howard E. Bishop presiding. The address of the evening will be given by Captain Irving O. Hay, humorist, and music will be furnished by the University of Pennsylvania trio.

Social service and the out-patient department will be two important topics on Friday's program. The morning session will be opened by Lena Waters, director, social service department, Hospital of the University of Pennsylvania, who will speak on the subject, "Relation of Social Service to the Hospital." The relation of the physician to the social service department will be discussed by Dr. William Stroud, Pennsylvania Hospital, Philadelphia.

"The Development of the Out-Patient Department," is the subject of an address to be given by Michael M. Davis, executive secretary, Associated Out-Patient Clinics, New York, and this paper will be discussed by Dr. G. Walter Zulauf, superintendent, Allegheny General Hospital, Pittsburgh.

This session will be followed by a luncheon at 1 p. m. The concluding session, which will open at 2 p. m., will be given over to the business of the association.

COOPERATING WITH STATE HEALTH AGENCIES

Twenty-five hospitals in Georgia and half as many railroads are cooperating with the State Board of Health in supplying needed medical and surgical attention for the rural school children of the state. Children are taken to the nearest hospital where they will receive care and treatment for two days at minimum rates. The railroads have authorized half fare for the parent accompanying the child and one-half rates for children under twelve years of age. Hospital service thus becomes accessible to all children, since there is a hospital within seventy-five miles of every school district in the state.

RULES MADE TO ENSURE SAFETY IN DRUG ADMINISTRATION

The tragic death of six babies in a Chicago hospital caused by a boric acid solution being given to them instead of drinking water, has been regarded as evidence of such grave laxity and inefficiency in the management of the hospital that it has led to the formation of rules to obviate the reoccurrence of a similar tragedy. The rules have been drawn up by a local committee of superintendents of Chicago hospitals and were issued March 19 by Health Commissioner Bundesen to all Chicago hospitals. These standing orders are as follows:

1. All drugs and solutions must be prepared under the directions of a registered pharmacist or physician and carefully labeled; all poisonous drugs must be kept at all times separate from non-poisonous ones.
2. All medicines shall be administered only on the written order of a physician, except in cases of extreme emergency.
3. Each hospital must post written rules approved by the board of health of the city for safeguarding the distribution of all medicines and solutions.

NEW YORK ASSOCIATION TO MEET AT SYRACUSE, MAY 26-27

Syracuse, N. Y., has been chosen as the place of the annual meeting of the Hospital Association of the State of New York, to be held at Hotel Syracuse, May 26-27. The program for the meeting has not yet been specifically arranged, but general plans have been announced by Dr. George B. Landers, superintendent, Highland Hospital, Rochester, N. Y., president.

Subjects pertaining to state business have been assigned to committees and, according to Dr. Landers, the reports of these various committees will be given first place on the program. Second in importance will be the discussion of topics that the committees recommend as pertinent to the reports. The remainder of the program will be given over to topics of general interest.

One of the subjects to receive special attention on the program is the nursing problem, and particular consideration will be given to the study that is being made of the cost of nursing to hospitals as well as to the simplification of the theoretical curriculum for training schools. The relationship of the superintendent to the board of trustees will also be discussed.

The annual banquet of the association will be held on the evening of May 26.

The various special committee reports will be given by the following people: nursing, by Dr. W. L. Wallace, Crouse-Irving Hospital, Syracuse; auditing, by Harry H. Warfield, Carson C. Peck Memorial Hospital, Brooklyn; membership, by P. Godfrey Savage, superintendent, Memorial Hospital, Niagara Falls; legislation, by Dr. John E. Daugherty, executive director, Jewish Hospital, Brooklyn; rules, by Dr. C. W. Munger, medical director, Grasslands Hospital, Valhalla, and workmen's compensation, by S. L. Butler, superintendent, Long Island College Hospital, Brooklyn.

MID-WINTER CLINIC HELD AT DENVER

Intensive studies and demonstrations of the various branches of medicine and surgery comprised the program of the mid-winter clinic of the University of Colorado School of Medicine and Hospitals, held at Denver, February 22-25.

CLINIC ON ADMINISTRATION TO FEATURE MEETING OF ILLINOIS ASSOCIATION

A PROGRAM including papers and discussions and demonstrations of special interest to the hospitals of the state is being planned for the annual meeting of the Hospital Association of the State of Illinois, to be held at the Hotel Sherman, Chicago, May 5 and 6, 1927.

Such problems as costs and charges, legislation, publicity for schools of nursing, minimum standards for the clinical laboratory, the organization and management of the pharmacy and physiotherapy have been given a prominent place on the program. As one of the special features of the meeting, a clinic on administration in which members attending the meeting will participate, will be held at the Presbyterian Hospital, Chicago.

The convention will open May 5, at 9:30 a. m., with invocation by the Rev. J. H. Bauernfeind, superintendent, Evangelical Deaconess' Hospital, Chicago. This will be followed by the address of welcome, to be given by Dr. Herman N. Bundesen, commissioner of health, Chicago, and response, by George S. Hoff, trustee, Lake View Hospital, Danville, former president of the association.

One of the most interesting features of this first session

Dr. P. W. Wipperman, President, Hospital Association of the State of Illinois.

will be the symposium on hospital financing, which will be discussed from three different angles. "Hospital Costs and Charges" will be discussed by Asa S. Bacon, superintendent, Presbyterian Hospital, Chicago. "Hospital Credits" will be discussed by Clarence H. Baum, superintendent, Lake View Hospital, Danville, and "Hospital Operating Deficits," will be discussed by Frank E. Chapman, director of the Mount Sinai Hospital, Cleveland.

The session will adjourn, with the appointment of the resolutions and nominating committees.

From 12:30 to 1:30 p. m., luncheon will be held at the hotel, at which time the presidential address, "The Future Program for the Hospital Association of Illinois," will be given by Dr. Paul W. Wipperman, superintendent, Decatur and Macon County Hospital, Decatur, president. The luncheon will be presided over by E. E. Sanders, superintendent, Ravenswood Hospital, Chicago, vice-president of the association.

The afternoon program will be featured by a symposium on hospital legislation in Illinois. "How to Secure and Maintain Proper State Hospital Legislation" is the subject assigned for discussion to Dr. E. T. Olsen, superintendent, Englewood Hospital, Chicago. "A Review of New Hospital Legislation in Illinois," will be presented by Matthew O. Foley, managing editor, *Hospital Management*, Chicago, and "New Hospital Legislation Needed for Illinois," will also be discussed, the speaker to be announced later.

The remainder of the afternoon program will be taken up with the subject of the county tuberculosis sanatorium in relation to the general hospital. "The County Tuberculosis Sanatorium as a Unit of a General Hospital" is the subject of a paper to be read by Dr. C. M. Jack, district counselor, Illinois Public Health and Tuberculosis Association, and president, Macon County Tuberculosis Association, Decatur. This subject will also be discussed by Dr. E. C. Cooley, Danville, and by Dr. Robinson Bosworth, medical director, Rockford Municipal Tuberculosis Sanatorium, Rockford, Ill.

From 6 to 10 p. m., a dinner general session will be held at the hotel, at which time the program will be taken up mainly with the subject of nursing and the hospital. An address "A Minimum Standard for Nursing," will be presented by Laura R. Logan, dean, Illinois Training School for Nurses, Chicago. This will be followed by an address by Dr. May Ayres Burgess, director, Committee on the Grading of Nursing Schools, New York, who will speak on the subject of the grading program. "Publicity for Schools of Nursing" is the subject to be discussed by Evelyn Wood, R.N., executive secretary, Central Council for Nursing Education, Chicago. Following these addresses and papers general discussion will be invited. The program will be in charge of E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago. Greetings from the American Hospital Association will be presented by Dr. William H. Walsh, executive secretary, Chicago.

Friday morning's program will open with a paper on "A Minimum Standard for the Clinical Laboratory in a Hospital," to be read by Dr. J. J. Moore, director, National Pathological Laboratories, Chicago.

"The Organization and Management of the Hospital Pharmacy'" is the topic assigned to Irving Becker, pharmacist, Michael Reese Hospital, Chicago. This will be followed by a paper on "Minimum Requirements for a Hospital Department of Physical Therapy," by Dr. John S. Coulter, Chicago. These papers will then be open to general discussion.

From 12:30 to 1:30 p. m., a luncheon will be held, at which time reports from committees will be presented, officers elected and other business transacted.

Personals

MRS. HELEN L. RICE, Lutheran Hospital, Chicago, is the new superintendent of the Kewanee Public Hospital, Kewanee, Ill., succeeding ADELAIDE M. LEWIS, resigned.

ANNA MCLAUGHLIN is superintendent of the Ossining Hospital, Ossining, N. Y.

ETHEL BOLLEY is the new superintendent of the Durand Hospital, Durand, Mich., succeeding ESTHER GILLESPIE.

MARY MURDOCK has been appointed superintendent of the Thanksgiving Hospital, Cooperstown, N. Y., succeeding MARIETTA NEWELL.

WALTER L. SIMPSON has been appointed business manager of the Watts Hospital, Durham, N. C.

GERALDINE BORLAND, formerly superintendent, Hermann Hospital, Houston, Texas, has been appointed superintendent of the new Rogers Park Hospital, Chicago.

DR. ARTHUR P. CALHOUN, for nine years superintendent of the Western State Hospital, Fort Steilacoom, Wash., recently died at the Columbus Hospital, Seattle. Before going to the Western State Hospital he was assistant superintendent at the Eastern Washington Hospital, Medical Lake.

DR. WALTER F. MYLIN has resigned as physician in charge of the Lancaster County Hospital, Lancaster, Pa. He will be succeeded by DR. J. LYTE RESSLER.

MARJORIE CHRISTIE, R.N., Wilkinsburg, Pa., has been appointed superintendent of the Sisterville General Hospital, Sisterville, W. Va.

MARTHA WALLACE, for ten years superintendent of the Memorial Hospital, Nashua, N. H., has resigned.

MARGARET ASHMUN is acting superintendent of the Orange Memorial Hospital, Orange, N. J., succeeding RUTH GARDNER CLARK, resigned.

JOHN E. SULLIVAN has been appointed superintendent of the J. B. Thomas Hospital, Peabody, Mass., succeeding MRS. ARVILLA FECKLER, resigned. Mr. Sullivan has been connected with the hospital for the past twenty years.

MRS. GERTRUDE C. ALLEN, formerly of the Jewish Hospital, St. Louis, Mo., and recently superintendent, Angelina County Hospital, Lufkin, Texas, is the new superintendent of the Woman's Hospital, Saginaw, Mich.

C. C. HURIN, for the past eleven years superintendent of the Iowa Methodist Hosptial, Des Moines, Ia., has resigned to enter business in that city. Prior to his coming to Des Moines he was connected with the Wesley Memorial Hospital, Chicago.

CHARLOTTE JANE GARRISON, formerly superintendent, Polk County Public Hospital, Des Moines, Ia., is the new superintendent of the American Hospital of Chicago, succeeding PAULINE MARTIGNONI, who is retiring from the hospital field after twenty years of service in private and public health nursing and superintendency. Miss Martignoni has been superintendent of the hospital for the past four years.

MRS. B. N. CLIFFORD has resigned as superintendent of the Jamaica Hospital, Jamaica, N. Y.

JOSEPH PURVIS has resigned as superintendent of the Scranton State Hospital, Scranton, Pa. Until a successor is named, MRS. R. H. JADWIN, president of the board of directors, will act in the capacity of superintendent.

FRANK P. ASLIP has been appointed superintendent of the Bellevue County Home, Hagerstown, Md.

DR. GEORGE F. HUFFMAN has been re-appointed superintendent of the county hospital, Florence Ariz., for the next two years.

DR. JOSEPH E. PRITCHARD, assistant superintendent, Manitoba Sanatorium, Ninette, Man., has resigned his position to join the department of pathology at Winnipeg General Hospital, Winnipeg, Man.

DR. JOSEPH J. SINGER has resigned as superintendent of the Robert Koch Hospital, St. Louis, Mo. He will be succeeded by DR. ROBERT E. SCHWARZ, assistant superintendent for the past three years.

LEORA WORTHINGTON, a graduate of St. Luke's Hospital, New York, is superintendent of the new Walla Walla General Hospital, Walla Walla, Wash.

DR. DAVID KRAMER, formerly of the staff of the U. S. Veterans' Hospital, Fort Bayard, N. M., has been appointed co-medical director of the New Mexico Cottage Sanatorium, Silver City, N. M.

DR. HUGH S. GREGORY, Binghamton, N. Y., has succeeded DR. JAMES E. WALKER as medical director of the Steuben Sanatorium, Hornell, N. Y.

DR. A. J. BARKER SAVAGE, formerly superintendent, Broad Street Hospital, New York, is to succeed DR. GEORGE D. STEWART as executive director of the enlarged Broadstreet Hospital.

DR. JAMES M. ODELL, Spokane, is the new assistant medical director of the Mountain View Tuberculosis Sanatorium, Lake View, Wash.

DR. LOUIS HOLLANDER, formerly superintendent, Brownsville General Hospital, Brownsville, Pa., is the new superintendent of the Miriam and Nathan Barnert Hospital, Paterson, N. J., succeeding the late DAVID A. SCHWAB.

RUTH S. WOODRING is superintendent of the new Shore Road Hospital, Brooklyn, N. Y.

BETTY HAMMETT has been appointed dietician at the Bergen County Hospital, Riegewood, N. J. For the past two years she has been assistant dietitian at the Rockefeller Foundation Hospital, Peking, China.

GERALDINE TREMAINE, recently assistant dietitian, Syracuse Memorial Hospital, Syracuse, N. Y., and Buffalo General Hospital, Buffalo, N. Y., and ROMA SCHAEFER, University Hospital, Minneapolis, Minn., have recently been appointed assistant dietitians at Montefiore Hospital, New York.

DR. BYRON S. CANE, assistant clinical director, U. S. Veterans' Hospital, Kingsbridge Road, N. Y., has resigned to join the staff of the Knickerbocker Hall Sanatorium, Amityville, N. Y.

DR. AMOS WILSON ABBOTT died in Minneapolis on February 27, at the age of eighty-three years. Abbott Hospital, which was constructed with funds donated by the late William Hood Dunwoody, was founded by Dr. Abbott.

MINNESOTA ASSOCIATION TO MEET AT DULUTH, JUNE 24-25

Open forums and round-table discussions will be a special feature of the annual meeting of the Minnesota Hospital Association, to be held at the Duluth Hotel, Duluth, Minn., June 24-25. Although the program is not yet fully developed, tentative arrangements have been announced and some of the speakers secured. James McNee, superintendent, St. Luke's Hospital, Duluth, is chairman of arrangements.

Following registration from 9 to 10:30 a. m., June 24, the morning program, consisting of addresses of welcome and other addresses, will continue until noon, when a luncheon will be held from 12:30 to 1:30 p. m. One of the speakers of the morning will be Dr. William J. Mayo, Mayo Foundation, Rochester, and the session will be presided over by Margaret Rogers, superintendent, St. Luke's Hospital, St. Paul.

The afternoon program, which will be held from 2 to 5 p. m., will consist of the reports of committees, the president's address and a round table, to be conducted by James J. Drummond, superintendent, Worrell Hospital, Rochester.

The annual dinner of the association will be held from 7 to 10 p. m., the speakers and entertainment to be announced later.

The morning program, June 26, will be featured by addresses by Dr. Malcolm T. MacEachern, associate director, American College of Surgeons, hospital activities, Chicago, and by Dr. William H. Walsh, executive secretary, American Hospital Association, Chicago. A paper on the "Registration of Technicians," will be presented by Dr. Kano Ikeda, director, clinical laboratories, St. Luke's Hospital, St. Paul. The program will then be concluded by an open forum, devoted to topics of vital interest, such as group nursing.

The afternoon session will be given over to the election of officers and other business and at 3 p. m., members will be given an opportunity of an automobile tour and a visit to the various hospitals of the city.

FOUNDER OF HOSPITAL FOR JOINT DISEASES DIES

Dr. Henry W. Frauenthal, founder and surgeon-in-chief, Hospital for Joint Diseases, New York, was instantly killed, March 11, as the result of a fall from a window on the seventh floor of his apartment in New York. Dr. Frauenthal had been ill for some time preceding his death.

He had practiced in New York for the past twenty-one years and during the past few years and had devoted much time and thought to the detailed planning of the special features of the Hospital for Joint Diseases, which was opened two years ago.

CLINICAL EXPOSITION TO BE HELD IN MILWAUKEE, JUNE 20-24

Plans are being formulated for the Hospital Clinical Congress of North America, to be held under the auspices of Marquette University College of Hospital Administration, at the Auditorium, Milwaukee, Wis., June 20-24. According to present plans, the Auditorium will be set up with working exhibits of modern equipment to demonstrate its use under actual working conditions.

The exhibition will have four divisions, hospital, public health, safety and research, and each department will be under the special direction of a clinical director from that particular field. It is also planned to have night meetings which will be open to the public, and throughout the congress special clinical teams for demonstrating the equipment will be supplied by hospitals. The auditorium is so arranged that a number of clinics can be conducted simultaneously. The program is in charge of Dr. John R. Hughes, dean, college of hospital administration. Preceding the meeting a short ten-day course on hospital administration will be held by the college as a part of its summer session.

COMING MEETINGS

American Hospital Association.
President, Dr. R. G. Brodrick, Highland Hospital, Oakland, Calif.
Executive secretary, Dr. William H. Walsh, 18 East Division Street, Chicago.
Next meeting, Minneapolis, Minn., October 10-14, 1927.

American College of Surgeons.
President, Dr. W. W. Chipman, Montreal.
Director General, Dr. Franklin H. Martin, 40 E. Erie St., Chicago.
Next meeting, Detroit, Mich., October 3-7, 1927.

American Medical Association.
President, Dr. Wendell Phillips, 40 West 47th St., New York.
Secretary, Dr. Olin West, 535 North Dearborn Street, Chicago.
Next meeting, Washington, D. C., May 16-20, 1927.

American Physiotherapy Association.
President, Gertrude Beard, Wesley Memorial Hospital, Chicago.
Secretary, Ida M. Hozenhyer, 2900 Mildred avenue, Chicago.
Next meeting, Washington, D. C., May 16-18, 1927.

American Protestant Hospital Association.
President, Robert Jolly, Baptist Hospital, Houston, Texas.
Secretary-treasurer, Rev. Frank C. English, Christ Hospital, Cincinnati.
Next meeting, Minneapolis, Minn., October 8, 9, 10, 1927.

Catholic Hospital Association.
President, Rev. C. B. Moulinier, 124 Thirteenth street, Milwaukee, Wis.
Secretary, Sister M. Philomena, 124 Thirteenth street, Milwaukee, Wis.
Next meeting, Milwaukee, Wis., June 20-24, 1927.

Hospital Association of the State of Illinois.
President, Dr. Paul W. Wipperman, Decatur and Macon County Hospital, Decatur.
Secretary, Joseph F. Miller, Methodist Hospital of Central Illinois, Peoria.
Next meeting, Chicago, May 5-6, 1927.

Hospital Association of New York State.
President, Dr. George B. Landers, Highland Hospital, Rochester, N. Y.
Secretary, Edgar C. Hayhow, New Rochelle Hospital, New Rochelle.
Next meeting, Syracuse, May 26 and 27, 1927.

Indiana Hospital Association.
President, Dr. M. F. Steele, Hope Methodist Hospital, Fort Wayne.
Secretary, Missouria Martin, Muncie Home Hospital, Muncie.
Next meeting, Evansville, April 7-8.

Minnesota Hospital Association.
President, Margaret Rogers, St. Luke's Hospital, St. Paul.
Secretary, Donald C. Smelzer, Charles T. Miller Hospital, St. Paul.
Next meeting, Duluth, June 24 to 25, 1927.

Missouri Hospital Association.
President, Dr. B. A. Wilkes, Missouri Baptist Sanitarium, St. Louis.
Secretary, W. J. Grolton, Missouri Pacific Hospital, St. Louis.
Next meeting, Kansas City, May 27-28, 1927.

New England Hospital Association.
President, Dr. Harold W. Hersey, Bridgeport Hospital, Bridgeport, Conn.
Secretary, Dr. Leslie Wright, Peter Bent Brigham Hospital, Boston, Mass.
Next meeting, Boston, Mass., May 5 and 6, 1927.

Ohio Hospital Association.
President, A. E. Hardgrove, City Hospital of Akron, Akron.
Secretary, Robert G. Patterson, 72 S. Fourth St., Columbus.
Next meeting, Columbus, April 5-6, 1927.

Pennsylvania, Hospital Association of.
President, Howard E. Bishop, Robert Packer Hospital, Sayre.
Secretary, John M. Smith, Hahnemann Hospital, Philadelphia.
Next meeting, Philadelphia, April 20, 21 and 22, 1927.

Wisconsin Hospital Association.
Rev. H. L. Fritschel, Milwaukee Hospital, Milwaukee.
Executive Secretary, H. K. Thurston, Jackson Clinic, Madison.
Next meeting, Milwaukee, May 23 and 24.

GOVERNOR SMITH URGES COUNTY HEALTH UNIT

That the county be made the basis of public health administration and that each county of New York should consider carefully the establishment of a health unit was strongly urged at the public health conference recently held at Albany, at the call of Governor Smith. About seventy-five representatives of the State Department of Health, the State Medical Society and other health interests attended the conference.

In addressing the conference, Governor Smith urged that the county be made the basis of public health administration and pointed to what has been done in Cattaraugus County to illustrate what can be done in county health work.

Commenting upon the progress of public health work in this country, Governor Smith said in part:

"The old-fashioned health idea was that the fellow came around and stuck the red or yellow flag on the door and locked everybody in and it was all done. That is not the state's idea of public health today. Our own department reflects it. It is the clinical laboratory service; the nursing service; the educational program for the prevention of disease and the opportunity for better treatment.

"Right along there has been a drift; sometimes it is hard to keep back the processes of government; they carry their own weight, but there has been a drift towards county administration of certain health matters, but that drift has been, by lack of proper control; it is haphazard; it is not performed in a satisfactory way; but the drift indicates that the time is not far away when the question of public health will have to be a county function if it is to be properly and scientifically, and incidentally, let me say, economically managed, because the ten dollar note for public health that is wasted is a double waste. We can lose ten dollars on the building of a road, but we cannot afford to lose it on either education or public health, because we cannot make it up. When it goes, it is gone forever. So that economy will in time suggest to us that this larger unit be adopted."

HARTFORD HOSPITAL TO BUILD HOME FOR DOMESTIC HELP

A four-story building to house its help is to be erected soon by the Hartford Hospital, Hartford, Conn., according to an announcement from Dr. Lewis A. Sexton, superintendent. The building is to cost $100,000 and will provide 125 rooms. It will be erected on the basement foundation of the old contagious building, which is to be razed, and the bricks of the old building will be used in the construction of the new, effecting a saving of $8,000. The first floor will provide the living quarters for the twenty-eight men employees and the other three floors will house the women employees, with separate living and reception rooms on the first floor. All bedrooms will be single rooms.

MISSOURI INVITES KANSAS AND OKLAHOMA TO MEETING

Plans are being made by the Missouri Hospital Association for its annual meeting, to be held in Kansas City, May 27-28, at the Baltimore Hotel. An invitation is being extended by the association to the hospital associations of Kansas and Oklahoma to attend the meeting, with a view toward forming of a tri-state association.

Up to the present time nothing has been done toward the formation of such an association but, according to Dr. B. A. Wilkes, superintendent, Missouri Baptist Sanitarium, St. Louis, president, it is hoped that a sufficient representation of these associations will be present at the coming meeting to warrant a proposal for a tri-state association.

The program for the meeting has not yet been definitely arranged but plans are being made to secure a number of speakers who are outstanding in the hospital and allied fields. An exhibit of hospital equipment and supplies will also be held in connection with the meeting.

PROGRAM BEING PREPARED FOR STANDARDIZATION CONFERENCE

Plans are being prepared for the program of the annual hospital standardization conference of the American College of Surgeons, to be held the week of October 3, at Detroit, Mich., just preceding the meeting of the American Hospital Association, in Minneapolis, October 10-14.

According to Dr. Malcolm T. MacEachern, associate director, American College of Surgeons, hospital activities, the program will lay stress on the practical side of administration, and ample opportunity will be given for general discussion on the problems to be presented. No topics will be introduced for discussion except those that are of paramount importance to the hospital field, and there will be a continuation of the discussion of the nursing problem and the care of the industrially injured from last year's program.

Other subjects that will be included on the program are: Care of the patient of moderate means; minimum standards for various clinical services, such as ophthalmology, oto-laryngology, rhinology and maternity, as well as minimum standards for the clinical laboratory, x-ray, case records and other departments.

A series of practical demonstrations on the principles of standardization will also be a part of the program.

HOSPITALS TO OBSERVE LISTER DAY

The Lister Memorial Committee of the Canadian Medical Association has sent out a letter to all the hospitals suggesting that all observe April 15, the anniversary of the birth of Lister. The letter suggests that the wards may be decorated in an appropriate way and that perhaps a lecture on Lister might be given to convalescent patients.

It further asks that the medical professions cooperate with public health authorities in selecting Lister Day as the date for special appeals in aid of hospitals and of all measures to interest the public in such problems as the anti-tuberculosis movement, the cancer campaign, and sanitation in general.

NEW ENGLAND ASSOCIATION TO MEET AT BOSTON MAY 5-6

The annual meeting of the New England Hospital Association will be held May 5 and 6 at the Medical Library, Boston, according to the announcement of Dr. L. H. Wright, Peter Bent Brigham Hospital, Boston, secretary and treasurer of the association. The association is composed of representatives of the state associations of New England and is a section of the American Hospital Association. The program for the meeting has not yet been arranged and will be announced later.

DR. MUSGRAVE DIES

Dr. William Everett Musgrave, an outstanding leader in the medical profession and hospital field of the country, died March 9, at his home in Ben Lombard, Calif., of heart disease. For many years Dr. Musgrave has been a recognized force in the several fields of medical endeavor to which he turned attention.

He is known to the hospital field principally as director of the University of California Hospital, San Francisco, which position he held in 1918. He showed his unusual ability as an organizer at that time in his reorganization of the Children's Hospital, San Francisco, on whose board of directors he served for five years, and in his readjustment of the Hahnemann Hospital, San Francisco, into an industrial medical institution.

Dr. Musgrave was also well known for his prominent part in activities of the American Medical Association, having been vice-president of the association in 1923 and

Dr. William Everett Musgrave.

a delegate to that body from the Philippine Medical Association, of which he was president, in 1905 and in 1911. He was also editor of *California and Western Medicine*, and was one of the founders and editors of *Better Health*. While in the Philippine Islands, where he resided from 1902 to 1917, he was also an associate editor of the *Philippine Journal of Science*.

From 1902 to 1909, he was pathologist at the School of Medicine, Manilla, P. I., and from then until 1917 he was professor of medicine and dean of the College of Medicine and Surgery, University of the Philippines.

He was particularly well known for his research in parasitology and for his views on the social relationships of medical practice. He urged control of medical charity to avoid pauperization and did much to popularize the work of the general practitioner in preventive medicine.

He was born in Framington, Tenn., September 12, 1869, and was graduated from the George Washington Medical School, Washington, D. C., in 1901. From 1901 to 1903 he was an acting assistant, U. S. Army. He also served as captain during the World War. From 1919 until his death he practiced in San Francisco and took an active part in local and state medical affairs, having served as secretary of the California State Medical Association.

SUMMER COURSE ON ADMINISTRATION OFFERED BY TEMPLE UNIVERSITY

A summer course in hospital and institutional management will be given at Temple University, Philadelphia, for the fourth time this year during its summer session extending from July 5 to August 13. As in previous years, the course will be directed by Charles S. Pitcher, superintendent, Presbyterian Hospital, Philadelphia.

The course is arranged both for those who are inexperienced and those who have had practical experience in hospital work and abundant opportunity will be given for observation and field work in the general and special hospitals of Philadelphia.

The curriculum will cover the following subjects; the organizing of a hospital; functions and principles of organization; administration; purchase and issuance; hospital accounting; histories and chart records, including medical and surgical cases coming under all of the special departments; food conservation; construction, heating and lighting.

Departmental studies will include the training school, out-patient department, functions of the social service department, laundry operation and management, housekeeping, functional organization studies of other departments and field work.

MARQUETTE OFFERS TWO SUMMER COURSES IN ADMINISTRATION

Two courses in hospital administration are to be given at Marquette University College of Hospital Administration, Milwaukee, Wis., this summer, according to a recent announcement of Dr. John R. Hughes, dean. The first course will be given from June 6 to June 17, just preceding the hospital clinical congress to be held in Milwaukee, under the auspices of the college.

The second course will be six weeks in duration, from June 27 to August 6. The courses are to be conducted by instructors from various parts of the country, who are leaders in their respective fields.

INDIANA MEETING TO BE HELD AT EVANSVILLE

A program including round-table discussions on nursing, fire insurance and other problems is being prepared for the annual meeting of the Indiana Hospital Association, to be held at the McCurdy Hotel, Evansville, April 7 and 8.

According to Missouria F. Martin, executive secretary, an important place will be given to informal discussion and those desiring special questions to be answered or discussed are asked to send these questions to Miss Martin.

An exhibition of equipment and supplies will be held in connection with the meeting, and arrangements are being made for get-together luncheons to be held each noon. The banquet of the convention will be held Thursday evening, April 7, at 7 p. m. Friday afternoon, from

4:30 to 6:00, delegates will be given an opportunity of an automobile tour.

The following speakers have been asked to present papers: Dr. Joseph C. Doane, medical director and superintendent, Philadelphia General Hospital, Philadelphia; Dr. William H. Walsh, executive secretary, American Hospital Association, Chicago; Dr. G. E. Mills, superintendent, Boehne Tuberculosis Hospital, Evansville; Clarence H. Baum, superintendent, Lake View Hospital, Danville, Ill.; and the Rev. Newton E. Davis, executive secretary, Board of Hospitals, Homes and Deaconess Work, Methodist Episcopal Church, Chicago.

The round table on hospital problems will be conducted by Robert E. Neff, superintendent, Robert W. Long State Hospital, and the round table on nursing problems will be conducted by Ethel P. Clarke, R.N., Robert W. Long State Hospital, Indianapolis.

The meeting, Friday evening will be open to the public.

FELLOWSHIPS FOR GAS RESEARCH GIVEN TO UNIVERSITY

An annual grant of two thousand dollars for the establishment of fellowships for the study of gases has been made to Western Reserve University, Cleveland, Ohio, by the Ohio Chemical and Manufacturing Company, 1177 Marquette Road, Cleveland. The study of gases will be carried on under the direction of Dr. H. S. Booth, department of chemistry of the university, the work to be done in the Morley Chemical Laboratory. The fellowships will be known as "The Ohio Chemical Fellowships" and will be devoted to pure science researches on gases, with particular emphasis on the gases of value as anesthetics.

Besides giving the fellowships, the Ohio Chemical and Manufacturing Company placed the facilities and equipment of its laboratory and plant at the disposal of holders of the fellowships for the design and fabrication of any special equipment needed. The company is one of the largest manufacturers of anesthetics in this country, supplying a large part of the nitrous oxid, ethylene, ether and oxygen used in America. It also makes hydrogen and dental specialties.

Since the days of Professor E. E. Morley, chemists of Western Reserve University have been deeply interested in research on gases. At the present time twelve students are carrying on research work in the Morley Laboratory, a goodly part of it being on gases. The fellowship work commenced at the beginning of the second semester and the students accepted at this time will continue as fellows for a year and a half. These fellows will also receive graduate degree credit for their work.

Although the company maintains its own research laboratory in which a number of chemists are employed, J. G. Sholes, president of the company, said that in giving the fellowships, he felt that pure science research worked at a greater advantage in a university laboratory than in an industrial laboratory.

"Industry has long depended upon pure science researches carried out in universities," he said, "for the discovery of fundamental knowledge upon which industry bases its processes. Only rarely has industry helped the university directly in the pursuit of such purely scientific knowledge. It has seemed to me that we, in industry, can at least make it easier for the university to carry out fundamental research and thus repay in slight measure industry's debt to the devoted research workers, laboring without thought of personal gain in the university."

Commenting upon the fellowships, Dr. Booth recalled the statement made recently by Dr. E. E. Slosson, of Science Service, that only three thousand researchers in pure science are carrying on work on which depends not only the work of millions but the whole possibility of advancement in science.

"The quiet surroundings of the university laboratory and its facilities in apparatus and libraries that it has taken decades to build and to collect, and in men who have studied for years for this work, make the university the ideal place for pure research. Cooperation between industry and university as expressed in the generous fellowships given by the Ohio Chemical and Manufacturing Company are of the greatest value in the development of both pure science and industry," said Dr. Booth.

PENNSYLVANIA SECTION OF C. H. A. MEETS

The annual conference of the Pennsylvania section of the Catholic Hospital Association, will be held at the Mercy Hospital, Scranton, Pa., April 18-19. The association is composed of members of the Catholic Hospital Association residing in Pennsylvania.

MAY 23-24 SET FOR MEETING OF WISCONSIN ASSOCIATION

May 23 and 24 are the dates set for the annual convention of the Wisconsin Hospital Association, to be held in Milwaukee, at Hotel Pfister. This was the decision reached by the board of trustees of the association at its recent meeting.

The program for the meeting has not yet been definitely decided upon but, according to H. K. Thurston, assistant director, Jackson Clinic, Madison, executive secretary of the association, it is planned to include in the papers and discussions many problems and subjects of vital interest to the administrators of the hospitals of the state and current problems of general interest to hospital executives.

The meeting will be presided over by the Rev. Herman L. Fritschel, director, Milwaukee Hospital, Milwaukee.

INDIANA TO OFFER SUMMER COURSE IN PHYSICAL THERAPY

A postgraduate course in physical therapy is planned to be given at the University of Indiana School of Medicine, Indianapolis, during the coming summer, provided that a sufficient number of physicians are interested. The equipment and clinical material of the Robert W. Long and the James Whitcomb Riley Hospitals will be used for teaching purposes under the direction of the staff of the medical school.

It is proposed to extend the course to six weeks in accordance with the recommendations of the council on physical therapy of the American Medical Association.

SANITARIUM EXAMINES 148,000 SCHOOL CHILDREN IN 1926

Over 148,000 children in the schools of Chicago were examined last year through the work of the Chicago Municipal Tuberculosis Sanitarium. The majority of the children, at least 100,000 were in kindergarten or first grade. Defects serious enough to need treatment were found in 110,000 and 43 per cent of these received the necessary corrections of defects.

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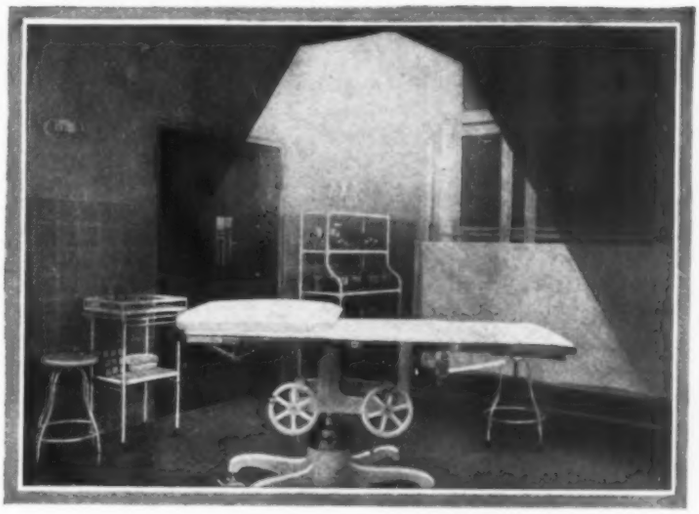

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YOUR EVERYDAY PROBLEMS

A department devoted to the informal discussion of problems arising in the everyday life of the hospital superintendent.

[No attempt has been made to offer final conclusions relative to the questions considered in this department. THE MODERN HOSPITAL will gladly welcome further comment by its readers on any of these problems, or the presentation of other queries for discussion in later issues.—Editor.]

What Should Be the Nature of the Superintendent's Rounds?

Round making is a term that is almost as old as is the hospital. When the physician makes rounds he inspects each patient under his care. The rounds of the hospital superintendent, however, in so far as the aims to be attained, may be of several varieties. If the institution is a small one, he may be able to make one inspection fulfill each one of these functions. If the superintendent be a physician, his round making may include the added function of learning something concerning the progress of the patients' disease, and a little concerning the nature and success of the treatment that is being instituted.

In large institutions, the superintendent often aims to accomplish but one phase of round making at any particular time. For example, a careful physical inspection of his institutional plant requires that he visit parts of the hospital which would not be necessary if he were seeking to learn only concerning the physical welfare of its patients.

In the above mentioned type of rounds, the superintendent, accompanied by the foreman of buildings, and his chief engineer, inspects with great detail the power house, the basement, the laundry, and as he progresses makes a written note of the matters that seem to need the attention of any particular person in the hospital personnel. At this time he is able to check the progress made on repairs, the need for which he has noted on previous rounds. It may be that one or more days, or parts of days, will be consumed in a complete inspection of the hospital plant from this standpoint.

Upon the return of the superintendent to his office, he may dictate the result of his inspection and transmit to his department heads a written list of repairs and improvements which he desires to have made. A copy of these lists then may be retained and used at the next round making, to check the completeness with which his orders have been observed.

If the superintendent aims to inspect that part of his hospital which has to do more with the scientific care of patients, he is accompanied by his medical assistant and the directress of nurses. He is joined by the dietitian when he reaches the dietary department, and by the heads of various hospital departments as he reaches their respective divisions.

His memorandum pad is much in evidence on these rounds, and those who accompany him often make notes on matters that require their individual attention. It is a good procedure, as has been suggested, for the notes which are made at each round making to be preserved for reference upon the next succeeding inspection, for it has been learned by most experienced executives that unless a check-up is devised, orders may be forgotten or improperly executed, and that a defect, which the executive feels has been corrected, is still unremedied.

If the superintendent is a physician, and is held responsible for the completeness of hospital records, it is necessary for him to visit one or more departments, and make a detailed inspection of the records there being kept. In some hospitals this will include a visé of the patient's history, the narcotic and alcoholic records, and inventories.

In smaller hospitals, the administrator may visit one or more departments, with the inventory list of instruments in hand, and compare the paper record of each division with the actual presence of ward property. This practice stimulates care and accuracy on the part of those responsible for these supplies and instruments.

In larger institutions, where intimate and detailed information cannot be secured by the superintendent in person, the training of assistants in the matter of keen observation of details is one way by which the administrator can keep informed as to the actual condition of the institution under his charge.

Painstaking round making is the only way by which the executive can keep himself informed concerning the actual condition of the physical plant and the functioning of the personnel under his charge.

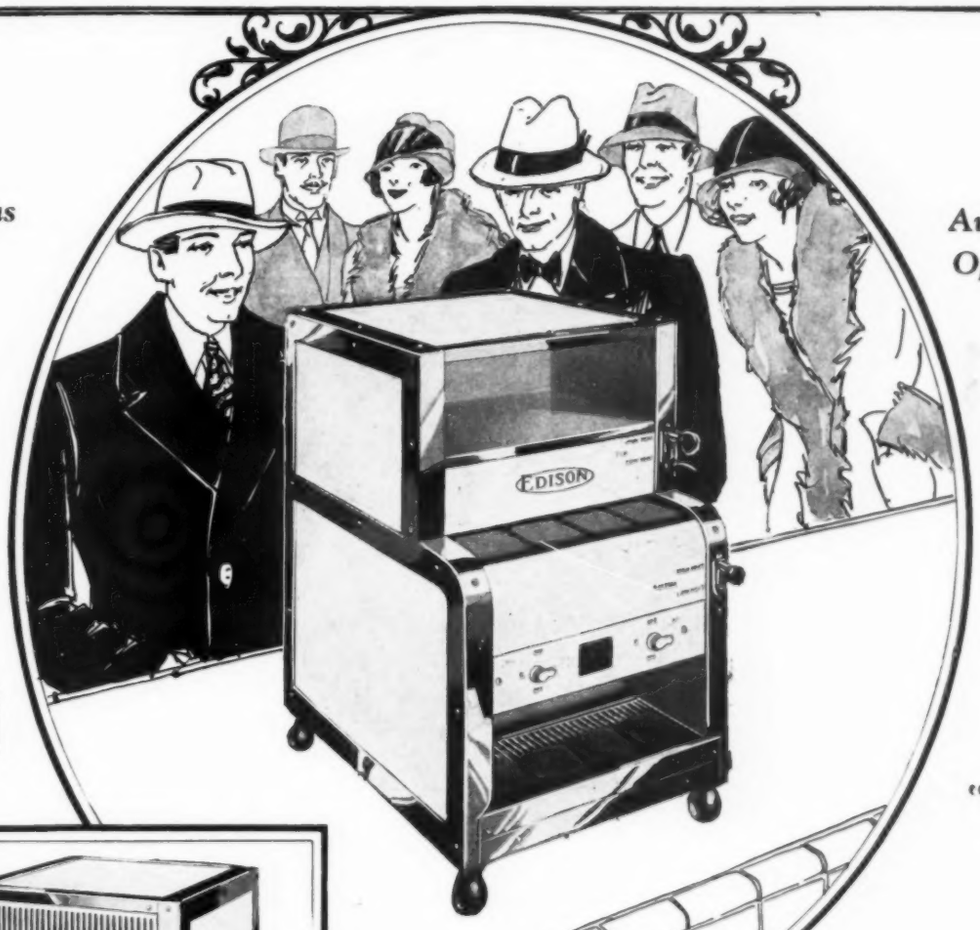
Do Hospitals Give Sufficient Consideration to the Rights of Undertakers?

This question has been asked the editor of THE MODERN HOSPITAL. The practical application of this query consists in a consideration of the ways and means by which the hospital may remove the opposition to postmortem examinations, which frequently originates with the undertaker selected by the late patient's family.

There is no doubt that a faulty technique in the preparation of bodies, before their removal by undertakers from the institution's morgue, has militated against the hospital's securing a higher postmortem percentage. Sometimes the nurse, who prepares the body, does not sufficiently elevate the head, so that its blood vessels are not properly drained before rigor mortis develops. Undertakers attach considerable importance to this matter. The fixing of the elbows, and not the wrists, with bandages or other supports also prevents suggillation of blood into the upper extremities and makes the mortician's work easier and more satisfactory. The proper support of the mandible with a muslin bandage, which is not too loosely or too tightly placed, is also urged by undertakers.

When it comes to the question of the correct performance of postmortems, there are a few common-sense requests, urged by undertakers, which pathologists should

MAKE BETTER TOAST THIS NEW WAY



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observe. To be certain that no thoracic incision is so high that by any chance it will be in evidence when the body is prepared for burial, is, of course, a major consideration. To leave long such arteries as the carotids makes embalming more easy, especially when a ligature is left attached thereto. Careless suturing of incisions, particularly those following the removal of the spinal cord and brain, is likely to bring about leakage, and will greatly inconvenience the undertaker. Often following the removal of the brain, plaster of Paris may be used to prevent leakage, and sometimes even this substance is used to close the spinal canal, after the cord has been removed.

It is a good plan, if possible, to give the undertaker an opportunity to embalm the body before the postmortem incisions have been closed, and in some institutions an attempt is made to have the undertaker present at the conclusion of the post-mortem examination, in order to permit him to do his work of tissue preservation at that time. The hospital may even furnish instruments and embalming fluid—a practice too rarely adopted by the institutions in the field. This custom adds but little to the expense of the hospital, and generates a feeling of appreciation on the part of the undertaker, which has its effect in lessening his opposition to postmortems.

Too great care cannot be taken in cleansing the body after postmortem examinations. If no such examination has been made, the preparation of the body for removal from the hospital, in so far as its coverings are concerned, should be given much attention.

To hasten the delivery of death certificates to undertakers, and to arrange for their notification as to the hour at which the body will be ready for delivery, and strictly adhere to this arrangement, is but fair play on the part of the hospital.

For the hospital pathologist, to appear at least once a year before the local undertakers' society, to discuss problems which are of mutual interest to both the hospital and the undertaker, has been found a fruitful measure in elevating the percentage of postmortem examinations.

The greatest difficulty in securing autopsies appears to exist in smaller cities and towns. It would seem that the statements made above are in every way generally applicable to hospitals, irrespective of their size. Indeed, the problem of bringing about a satisfactory understanding between the hospital and the undertaker would appear to be simplified rather than complicated where but a few undertakers need be considered.

For an amplification of this subject, the reader is referred to THE MODERN HOSPITAL, Vol. XXVII, p. 80, September, 1926.

How Can the Hospital Lessen the Waste of Water?

When one wishes to express the acme of inexpensiveness, the term "free as air" is often used. This same idea is often manifested toward the use of water by the hospital. In many localities the use of a water meter has not been adopted. Where the institution purchases its water for utility purposes by the gallon, the checking of the amount of water used is greatly facilitated.

Often, because of the charitable nature of the hospital's work, a reduced rate is given by local water companies. But even in the absence of water meters, and in the presence of reduced water rates, there exists no valid excuse for extravagance in the use of water.

One institution recently made a rather accurate computation of the amount of water used, and its superintendent was greatly surprised to learn that several hundred thousand gallons were consumed every twenty-four hours. In this particular instance, the institution being one for the care of mental diseases, not an inconsiderable part of this total consumption was traced to the general use of automatic flushing toilet boxes. Now, on account of the nature of the illness of the patients treated, there was a greater argument here for the use of this type of fixtures than might exist in the general hospital.

Automatic toilet fixtures are sometimes installed in institutions where there appears to be little need for them. The modern fixture, in which the toilet tank has been replaced by a valve connected directly with the house line, has greatly lessened this water waste.

A routine general inspection of spigots throughout the hospital will often reveal the presence of minor or major leaks, which in the course of a year account for the needless waste of thousands of gallons of water.

The careless employment of lawn sprinklers, or the failure frequently to inspect outside water connections results in a needless waste of water. In the laundry, the bottoms of washers are sometimes not kept properly gasketed, while frequently much more water than is necessary is used in the cleansing of linens and other laundering.

Not only is it fair to other consumers of water to prevent unnecessary leakage, but also the presence of a waste of any sort engenders an unhealthy spirit on the part of those who observe this condition.

How Can the Interns' Library Be Developed?

That each institution should endeavor to provide a reference library for its intern and visiting staffs admits of no argument. Unless the hospital supplies reference books on medicine, surgery, and kindred subjects, the resident physician is at a loss to amplify his knowledge on subjects that arise in the course of his daily work. In most cities medical libraries are available, but their usage may mean time lost from the physician's service to his patients.

In hospitals of any size, an effort should be made to develop a staff library. Frequently, some understanding person of means is willing to donate medical books, or to authorize the hospital to buy books that may serve as a nucleus for this collection. Sometimes the individual members of the intern staff are urged each to donate a book annually. Often the members of the visiting staff are willing to give to the library some of their books.

It is possible for the hospital, for a nominal sum, to join some association that has for its object the interchange of books of which its subscribers possess duplicates. These associations, of which there are several in the United States, send monthly a list of books which are available.

It is a good scheme for the hospital to subscribe for a number of current medical journals, and for these magazines to be preserved and bound.

Sometimes a member of the intern staff is given a nominal sum for acting as staff librarian. Again, where a library is of considerable size, the part-time services of a trained librarian may be secured.

The hospital, from time to time, should feel obligated to present to the resident physicians' library one or more books. If the superintendent of the institution takes an active interest in developing this important hospital function, ways and means, determined by local conditions, may suggest themselves for increasing the number of books available.

Why Ripe Bananas *are* Easily Digested

THE accompanying microphotographs, with their legends, were made by Professor Francis E. Lloyd, Macdonald Professor of Botany at McGill University. They show how the starch of the green banana changes during the process of ripening to the easily digested sugars of the fully ripened fruit.

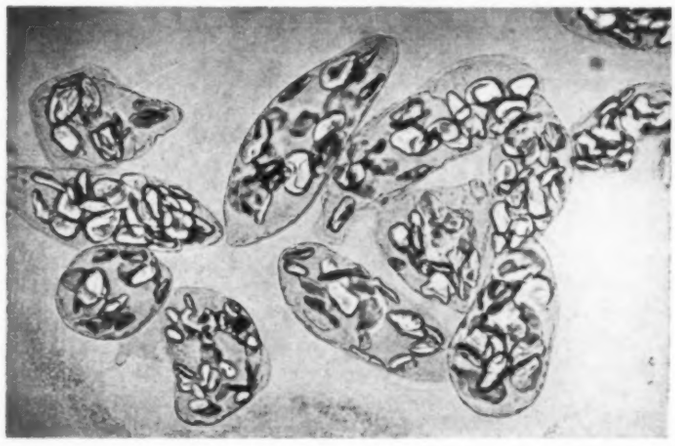

FIG. 1, GREEN BANANA—*Showing all the cells with their complement of starch, and all the grains entire. Cooking breaks up these starch grains and renders the green banana as nutritious and digestible as a baked potato or other cooked starch foods.*

FIG. 2, FULLY RIPE BANANA (*yellow skin flecked with brown*)—*Showing most cells entirely free from starch. The pulp is now of fine, mellow texture, delicious flavor, and one of the most digestible of foods.*

IN the ripening process the disintegration of the starch grains and their gradual conversion into sugars render the fruit palatable and easily digested. Thus the ripe banana has been found an excellent carbohydrate food for young children as well as for adults.

Send coupon for "The Food Value of the Banana," by Skinner, Sherman and Esselen, Inc., Consulting Chemists. It contains much interesting information on this all-food fruit that you can use to advantage in prescribing diets.

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What Sanitary Measures Should Be Adopted in Regard to the Nurses' Swimming Pool?

It has been discovered on more than one occasion that where nurses have access to a swimming pool there is an incidence of nose, throat and ear conditions, which can be apparently traced to this source. Nose and throat physicians practicing at the seashore and other places near the water are constantly confronted with infections that arise from this source.

Sometimes the cause of this condition appears to be purely traumatic. On the other hand, unless attention is given to the proper sterilization of the water contained in the pool, it is reasonable to expect that the difficulties mentioned above may have an infectious origin.

The usual method of purifying this water is by chemical sterilization, chlorin being the agent employed. To be sure, if chemical means are not at hand, frequent emptying of the pool, and the thorough scrubbing of its walls and floor with soap and water should be a satisfactory solution.

The amount of chlorin employed is usually one part per million. There is one disadvantage in the use of chlorin, and that is the irritation of the eyes arising from contact with the gas, particularly when the atmosphere of the room becomes heated. Copper sulphate—two parts to the million—is also sometimes used for this purpose. In some places, ozone or the ultraviolet rays are employed.

The customary rules in regard to the preliminary use of a shower, with soap and water, before entering the water, should be enforced.

Sometimes, in the interest of economy, the same water may be refiltered and returned to the pool for further use. It is not a bad procedure, from time to time, to secure samples of the water from a swimming pool for bacteriologic examination, the presence of colon or other pathologic bacilli, indicating that the proper purification methods have not been adopted. The application of chemicals to the water is often done by an automatic apparatus, supplying a certain amount of chemicals per measured volume of water.

Success in maintaining proper sanitation in the use of the swimming pool, and the prevention of infectious conditions arising from its use, are largely determined by the constant supervision of some one person to whom this duty is assigned.

Should the Hospital Own an Ambulance?

Some very efficient and modern hospitals do not feel that it is necessary to conduct an ambulance service. Others feel that the hospital is not doing its duty unless it is able to furnish to the public a comfortable and speedy means of transportation of the patient from his home to the hospital ward.

On more than one occasion the opinion has been expressed in THE MODERN HOSPITAL, that the community relationships of the hospital are such that the hospital is in a measure responsible for the welfare of the patient from the beginning of his illness. If a delay must ensue, as a result of arranging for the pr'vate conveyance of the patient to the hospital, then it would appear that one of the hospital's opportunities for the most speedy relief of illness has been overlooked.

To be sure, where institutions are located in industrial communities, often each firm employing the hospital's facilities possesses its own means of transportation of its injured employees.

In other instances, it has been felt that when a patient cannot afford a private conveyance, it is the duty of the local poor board, or other charitable agency, to arrange for such transportation.

It would appear, however, that when this situation is complicated by the necessity of making, in each instance, such an arrangement, delay in applying the curative measures which the hospital possesses must result. It is generally felt, therefore, that unless local conditions are such that the same type of service can be rendered by outside agencies as should be expected of the hospital's ambulance service, the institution should have in its possession, and under its complete control, means of transportation speedily to convey its patients from the home, where they become ill, to the hospital ward where treatment of their disease can be expected.

How Can Economy in the Use of Paper Cups and Towels Be Brought About?

It has been fairly well proved that the hospital can save money and promote sanitation by the general or limited use of paper cups and towels.

The cheapest type of paper cup that may be used is, of course, the envelope variety, and dependent somewhat upon the type of service required will be the success in the use of this type of cup. Very ill patients, of course, can not use a paper cup, but sometimes even this type of patient can drink from a paper cup, if a suitable holder is provided for it, that is, one with a handle that is easily managed.

Paper cups may be several shapes. The moulded and paraffin covered cup, with a flat bottom, is useful for almost any purpose. If the patient is not confined to bed, it is hardly necessary to purchase a cup which can be set down; the envelope or cone shaped cup, dispensed from a proper fixture, is usually quite satisfactory for this purpose.

The hospital, of course, should set an example by dispensing with the common drinking cup, and this is certainly possible only if collapsible cups are used, or if the shape of the cup is such that it can not be set down on a table and reused.

Economy in the use of paper cups seems to lie in the purchase of those of moderate price, and the installation of suitable dispensers, from which but one cup at a time can be withdrawn.

In some hospitals it is the duty of some one member of the personnel to keep towel and cup dispensers filled, and to report to the superintendent, or other official, any signs of improper use of the cups or the other articles that are contained therein.

In so far as paper towels are concerned, they may be of all sizes and grades, but a towel of moderate size (11″ x 14″), which is of sufficient absorbent quality so that the use of one towel will properly dry the hands, is perhaps the most efficient.

Paper towel rollers, which permit of the withdrawal of but one towel at a time, and which prevent the unrolling of any more, except with a repetition of the effort required, promote economy. Roll towels, which are sufficiently absorbent, can be dispensed from such a roller with much more economy than if the user is tempted to employ two or more towels for meeting the purpose for which one should be sufficient.

Supervision of the issuance and use of paper cups and towels, of toilet paper, and perhaps of paper such as is used in some hospitals for the manufacture of diapers, is necessary. If these duties be assigned to one man, more satisfactory results will be obtained than if there be no centralized responsibility in their performance.

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Another addition to the long list of institutions *Crane-equipped throughout* is the Williamsport Hospital, Williamsport, Pa., with one hundred bathrooms and exceptionally complete appointments. Architects, Stearns and Woodnutt, Philadelphia. Plumbing Contractor, William T. Reed, Williamsport. Heating Contractor, Keller & Co., Williamsport.

A BENEFICENT CIRCLE OF EXPERIENCE

Said Bismarck: "Fools say they learn from experience. *I* learn from the experience of others." Not always do ordinary mortals have trustworthy data from others to guide them. But in planning the plumbing and heating for a hospital, it is available. In equipping many hospitals of every class, Crane has stored up valuable experience which hospitals in increasing numbers are drawing upon. And because so many new hospitals are drawing upon Crane experience, the circle of Crane knowledge is growing continually wider.

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Crane Babies' Bath

HOW A GLOOMY FRONT DOOR AND RECEPTION ROOM WERE TRANSFORMED

By Charles H. Young, M.D., Director, Maine General Hospital,
Portland, Me.

THE barroom has gone to join the dodo and the good five-cent cigar. As a memory it appeals to the emotions, perhaps to the affections of some, rather than to the reason.

What has this barroom to do with the front door of the old hospital building? Much! Nothing is wholly good

The old wooden doors were replaced by modern glass panels.

or wholly evil and the old barroom had one salient feature that should be an inspiration to many hospitals, since much of its success depends upon its front door. One who has visited a barroom knows how easily that door swung open as if welcoming him in and how vigorously it snapped back beyond the threshold as if to pitch his troubles out behind. Do something to give your customer, the patient, that same feeling when he has entered your front door and you have made a friend of him.

Again, the barroom customer, once inside that door, found awaiting him light, music, cheer, understanding, the desire to make him happy, to dull his cares, to ease his pain, to drown his sorrow, just the service the hospital should seek to render, expressed in the most convincing terms by its reception of the one who enters.

In England all that is ugly in art and architecture is blamed on the Victorian era. In America we may blame the corresponding time, the "John L. Sullivan period," for the big, broad and brutal architecture of many of our public buildings, including the hospitals built a few decades ago.

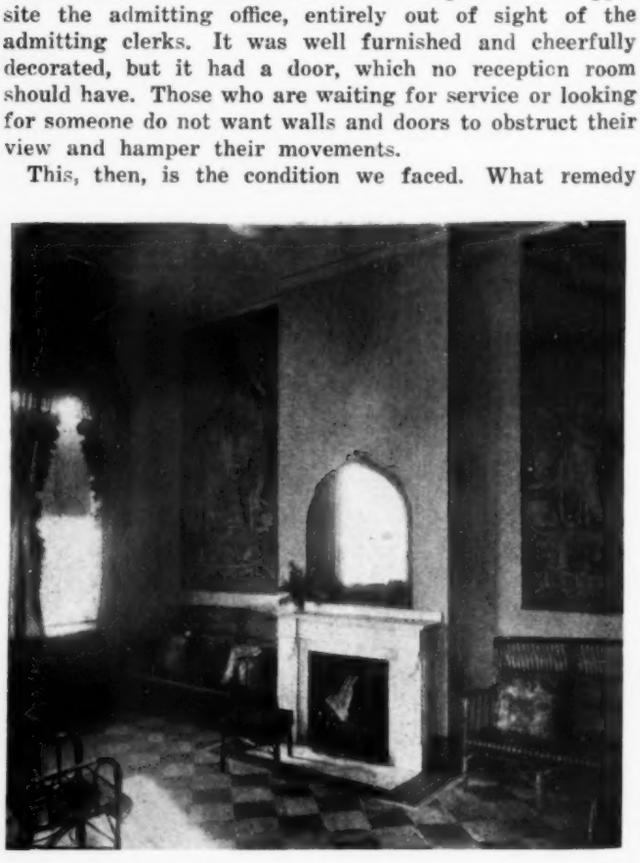
This hospital whose front entrance we have reformed belongs to that period, massive in construction, its rooms too spacious, its ceilings too lofty, its doors too solid. The great front door, thick, high and heavy, showed splendid craftsmanship in paneled oak, and ornate moulding, but, ponderous in structure, forbidding in aspect, it conveyed no invitation and seemed rather designed to repel the invader.

If, after considerable physical exertion, one opened that high and massive front door, he found himself in a hallway its height greater than its width, its walls sombre, no person in sight to greet or direct him. Stepping to the main corridor, if one glanced in the right direction, a lone sign showed the admitting office, another place of gloomy interior and sombre walls hung with numerous paintings, steel engravings and water colors.

These mural decorations were the likenesses of men of sterling worth and honest virtues, sturdy pioneers who founded the hospital and whose benefactions and wise counsel made it possible for the sick and the destitute to be cared for, but their stern, unsmiling countenances frowning down on the arriving patient and his friends, made more dismal this part of our building. Properly placed, these pictures may be an inspiration to the present generation and a reminder of the great debt we owe to the foresight and unselfish devotion of our predecessors, but they can add no cheerful note to our patients' reception.

One other vital mistake was the reception room opposite the admitting office, entirely out of sight of the admitting clerks. It was well furnished and cheerfully decorated, but it had a door, which no reception room should have. Those who are waiting for service or looking for someone do not want walls and doors to obstruct their view and hamper their movements.

This, then, is the condition we faced. What remedy



A view of the redecorated reception room.

ST. LUKES HOSPITAL, CLEVELAND, OHIO, HUBBELL & BENES, ARCHITECTS.

What Price Fireproofing?

Must Homelike Beauty Be Lost?

PURELY a hypothetical question, as far as doors are concerned. It is based on the assumption that no such door as Pyrono, "The Wood Veneered Door with the Fireproof Core", exists. Since Pyrono's advent, however, architects and hospital superintendents have not been confronted with the necessity of choice between safety, and cheerful, homelike surroundings for patients.

Pyrono makes possible the selection of any wood grain which is felt to harmonize most completely with the hospital's scheme of design. Its safety is attested by its presence in such structures as the St. Luke's Hospital, Cleveland, the Beth Israel Hospital, New York, and the Columbia-Presbyterian Medical Center, New York.

Let us send you further information on Pyrono's comparatively low cost, performance, tests, etc.

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could we apply? It is easy, in designing a new building, to follow precedent, to profit by the experience and genius of others who have evolved the ideal. An old building presents difficulties, construction limitations, and worse, the old conservative community has traditions and prejudices that cannot be thrust aside or torn down like bricks and mortar.

Attempt it and epithets like these are thrust at one:

"We have gone on and done great service for fifty years with this."

"The hospital entrance must be dignified, imposing, impressive."

"These changes will spoil the architectural effect in which we take so much pride."

"All this money could be better spent doing something for the patient and there are so many things needed to improve service."

"This front is a memorial to those who designed it and who gave so much to us."

To all of these remarks the answer may be: "We want to do greater service. The founders and builders of the institution expected greater things of those who would come after them."

What the Patient Wants

The patient does not come attempting a dignified entrance, he doesn't want to be impressed, he isn't in a mood to appreciate architectural effects. He is utterly selfish, he considers himself alone, wants to be made well and wants the quickest and least troublesome method of getting over the irritating business of his reception and admittance. From the moment of his entrance to the time of his departure it is our duty to give him cheer, peace and comfort.

In counting the cost it should be remembered that if our clerks are so placed that they cannot see everyone who comes in and goes out they will miss many opportunities of interviewing someone who can, and will, if properly approached, help to meet the expenses of the patient. More important is the fact that we will make more friends and elicit stronger support if we make our first contact and impression one of friendliness and cheerful service.

With the conviction of the desirability of a change established there remains the problem of reconstruction and, quite as important, the visualization of the end-result. We were certain that we wanted to eliminate undesirable things, that we must rip and tear out walls and incumbrances, must open up a gloomy interior and let in the light, and must reconstruct, so that we could carry on our work efficiently and economically and at the same time please the patient, his friends, the staff, the hospital personnel, the public, in short, all who entered. There seemed to be but one way of doing this, that was to eliminate walls and doors as much as possible, to open up so that everyone could see everyone else. Thus, we took down our solid ten-foot front doors, replaced them with lighter seven-foot doors, mostly of glass, filled the space above with glass, bringing these new doors seven feet forward and flush with the outside of the building at the foot of the short entrance stairway instead of at the top, as formerly.

With another pair of light glass doors at the top of these stairs we form a vestibule in the winter time. Large radiators on each side on a ledge above the stairs superheat this vestibule so that the opening and closing of the doors force a warm draft into the reception hall. On each side of this vestibule we removed the twelve-inch wall and put plate glass in its stead so that the person entering sees on one side the admitting office and on the other the reception room and can in turn be seen entering by those inside.

Once inside, the individual finds himself in an open space, on his left a counter formed of the top of steel cabinets behind which the admitting clerks and telephone operator are on duty. There is no grill work or cage above this and it is open to the ceiling. Beyond he sees an open door leading into the bookkeeper's office.

Directly opposite is the waiting room, a three-walled room, wide open, with light jade green and burnt orange reed furniture, a large mirror over the mantle, tapestries on the wall, a writing desk, reading table, lamp and other homelike furnishings.

Interior Decoration of Waiting Room

The furnishing of this space was not left to the taste of a committee and the superintendent shifted responsibility by securing a donation of the services of the best interior decorator obtainable. We have tried to make this waiting room as much as possible unlike any hospital waiting room that we have ever seen. It interests people, it pleases them, because it is unusual, artistic, and is such a contrast to the old order of things that visitors often express their surprise and approval. Every nook and corner of this space is within sight of the admitting clerks and the telephone operator.

Members of the staff register at the admitting desk, and if they neglect to do this we listen to no complaint of not receiving calls. The main corridor extends at right angles to the reception hall, with the superintendent's office on one side and the school of nursing office opposite. On the other side the old reception room is used as a lounging and consultation room by the professional staff. An extension of the reception hall across the corridor forms another waiting room with settee and chairs where salesmen, applicants for positions and others may wait. We attempt to use the entrance waiting room solely for friends of patients, those wishing to see members of the staff and visitors.

The superintendent's office and the school of nursing office have been redecorated and furnished with modern office furniture in keeping with the arrangement and decoration of the whole front door system.

The wall color is the popular French gray shade, with ceilings a trifle lighter.

At first we were confronted with a little criticism of the cost and a good many suggestions as to how we could have arranged it better, but now that it has been in operation for over six months, all criticism has vanished and the change is highly praised. Many people who have come into the new entrance after knowing only the old, congratulate us on the improvement. We feel that we have gained many friends through these changes and our income has nearly doubled. The latter desirable result has been secured partly by a more efficient personnel, more persistent collection methods and closer follow-up, but we feel that in no small measure it is due to the fact that everyone who entess is seen.

I rejoice that the old barroom with its associated evils has gone, I hope never to return, but acknowledge with gratitude the example which it set by its easy entrance and its promise of cheer.

The greatest improvement that can be made in an old hospital, the best financial investment, the most hopeful method of making friends, is to tear down the ponderous old church doors, replace them with glass, open up the interior, let in light and drive out gloom.

Kelvinator equipped: The St. Joseph Mercy Hospital, Detroit, Michigan

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No hospital or sanitarium that has ever employed the advantages of Kelvination would willingly attempt to operate without it.

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PAVING THE WAY FOR THE CRIPPLED CHILDREN OF ARKANSAS

By the Rev. O. P. Christian, Superintendent,
Arkansas Children's Home Society,
Little Rock, Ark.

Jennie's face tells that she is happy in her new home.

AS a part of its program of receiving for adoption and care the homeless, neglected and abused children of Arkansas, the Arkansas Children's Home Society, Little Rock, maintains a hospital for the free treatment of poor children of the state. This undertaking was initiated when the society found that ninety per cent of the children received for adoption had orthopedic troubles.

Up to this time the state has made no provision for the care of these children, notwithstanding the fact that a state-wide survey showed that there were 2,642 children in the state having club feet and 2,127 suffering with infantile paralysis, and about seventy-five per cent of these children were in families that were unable to pay for hospitalization.

Realizing the increasing number of such children who need medical and hospital treatment and that it was left for private initiative to undertake this work, the Arkansas Children's Home Society, a non-sectarian charitable group, organized in 1912, has built a sixty-six bed hospital adjacent to its two receiving homes for boys and girls. Two residences owned by the society constitute the receiving homes, one for boys and the other for girls, each having a capacity of forty-five children, where the children are maintained until they are ready for adoption. In no sense are the homes orphanages or reformatories but rather clearing houses for homeless children until they can be placed in desirable private homes. In addition to their maintenance, the children are schooled and their surroundings made as homelike as possible.

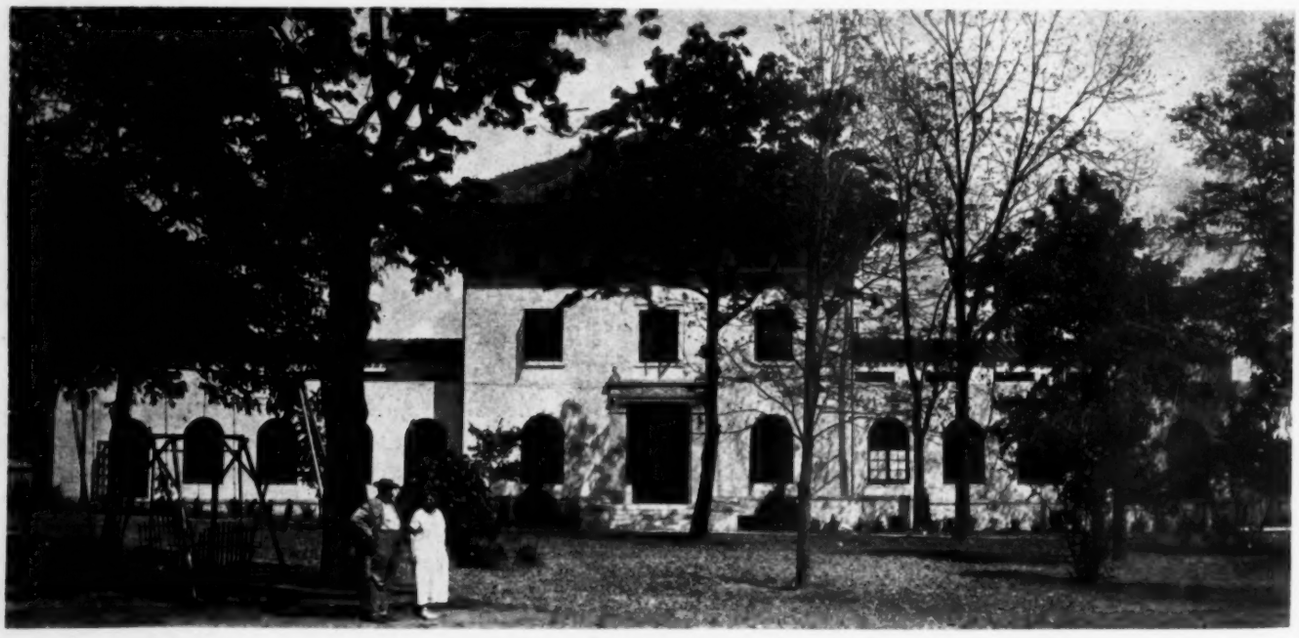
Like the homes, which were made possible by gifts from Mrs. C. A. Forney and through the will of Joseph Kendrick, citizens of Little Rock, the hospital, the only exclusive children's hospital in the state, was made possible through the will of the late Captain E. S. Hilliard of Eudora, Ark., who left $50,000 for this purpose. This sum has been supplemented by the gifts of several individuals, the sums ranging from $1,000 to $25,000.

In addition to its regular medical services, which are donated by the physicians and surgeons of Little Rock, the hospital maintains a free clinic three times a week.

The hospital is a four-story building of the Spanish type of architecture, with complete facilities for the medical and surgical treatment of sick and crippled children.

The board of directors for the homes and hospital consists of twenty-four representative business men and women of the city, selected from various religious denominations.

The hospital receives no help from the state and has thus far been maintained through the donations of friends.



Front view of the new hospital of the Arkansas Children's Home Society, Little Rock, Ark.

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—is one of the most elusive words in the English language.

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the only kind of service that's worthy of mention is where something is done that *unconsciously registers pleasingly* on the minds of those who receive the service.

A good surgeon or a good nurse operating under the handicap of poor or mediocre facilities can easily spoil the Good Reputation of both themselves and the hospital.

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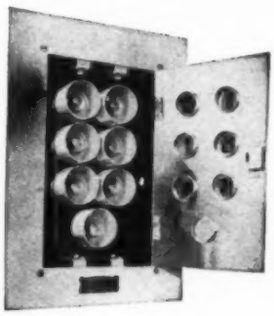

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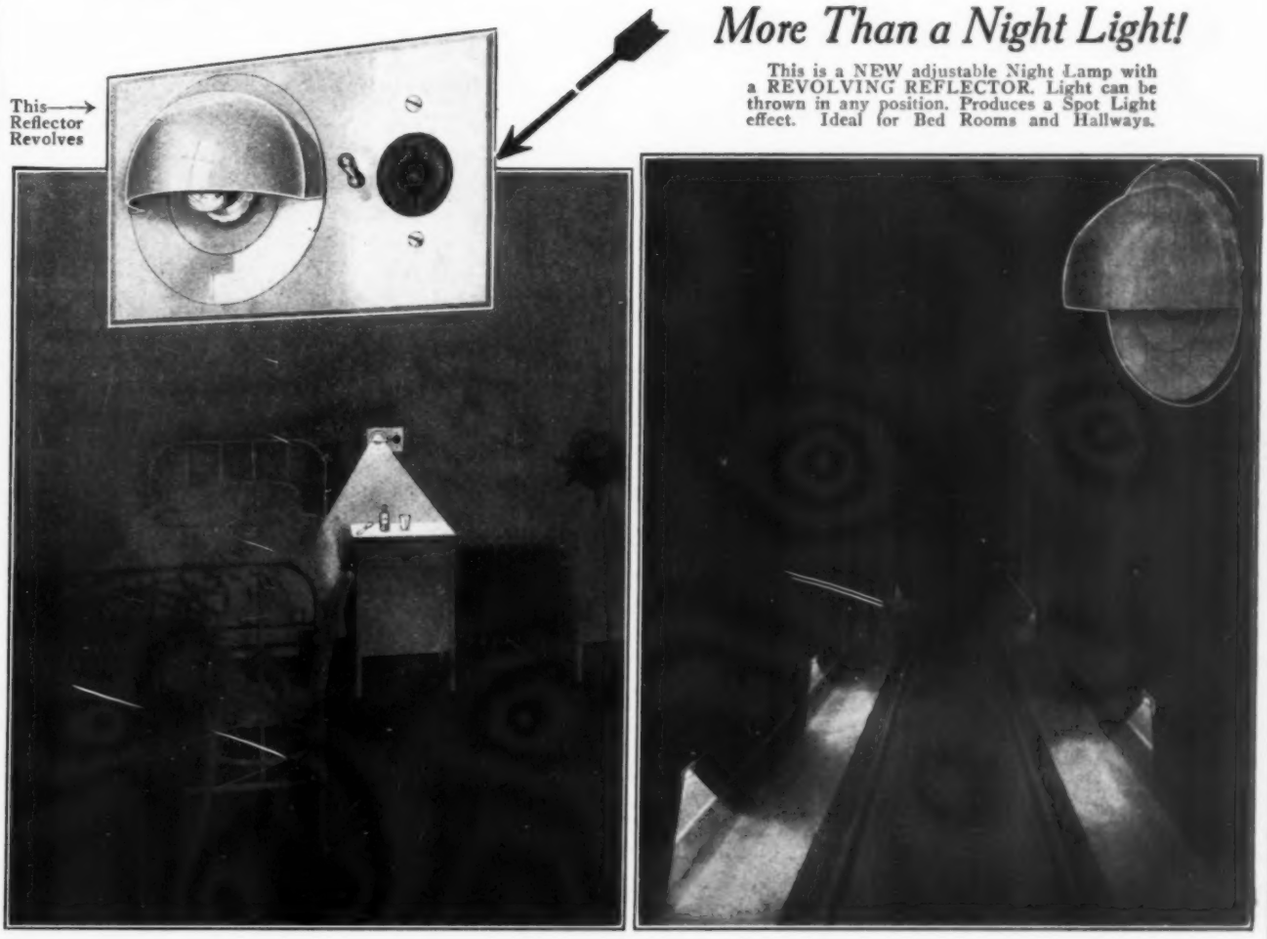


BREAD BAKING WITHIN THE HOSPITAL

THE question of whether it is feasible for hospitals, both large and small, to have bakeries or facilities for baking their own bread as well as pies, cakes and other pastries, has often been presented to hospital administrators for solution but the problem is still in the controversial state. There are numerous adherents to the cause of contracting for bread, and as many, if not more, who champion all baking being done within the hospital.

From a purely casual observation it would seem that large institutions would be in a better position to maintain their own baking establishments than the smaller hospitals, where the demand is not so great and the facilities for such procedure are not always at hand. However, there are several factors that must be considered whenever a decision as to policy has to be made. What is good for one hospital may be entirely out of the question for another of the same size, in a similar community, and seemingly having the same problems to solve.

Majority Do Own Baking

From the general run of answers to 350 questionnaires sent to hospital administrators throughout the United States, it would seem that in a majority of large hospitals, the baking is done at the institution by a baking staff, comprised of a first baker and an assistant. These bakers are selected to do only the baking, which includes the preparation of such goods as pies, cakes, biscuits, rolls and pastries, as well as breads of various natures. Some of these hospitals have done their own baking for many years while others have adopted the practice only recently, after having discovered that bread could be made in their own bakeries as cheaply if not more so than it could be contracted for with a commercial bakery.

While the smaller hospitals have not as yet found it practical to include bread baking, most of these institutions do bake all pies and other pastries used either for the patients or personnel. In many of these hospitals where both bread and pastries are prepared the baker is engaged in baking only a portion of the time that he is at the hospital, utilizing the remainder of the time in acting as second cook or in some other capacity. In one hospital the bread baker also prepares the midnight meal for the night duty force.

In many of the other small institutions the installation of baking equipment capable of baking bread as well as the other bakery products is contemplated. Both gas and electric ovens are being installed.

The question of expense, which seems to be the stumbling block for so many other operations in the hospital, also enters into the problem of baking. Whether the administration can secure better bread at less expense or even at the same price as when bread is contracted for with a commercial bakery, or whether the latter is more satisfactory is still a debatable point. But from the number of answers stating that no increase is apparent in operating expense when bread is baked within the hospital, it would seem that such a procedure does not increase the expense but in most cases decreases it, and also has the added advantage of improving the quality of the bread. It is the opinion of most administrators that they can be more certain of the quality when the baking is done within the hospital.

The satisfaction voiced in the following excerpts from some of the answers of those who are doing their own baking portrays the general feeling of the group:

P. J. McMillen, superintendent, City Hospital, Cleveland, an institution of 1,069 beds, states, "We feel that this procedure is not only economical but that the products being made under our own control are much more satisfactory."

"Our bread costs us $0.058 for a loaf of seventeen ounces," writes Henry M. Pollock, M.D., superintendent, Massachusetts Homeopathic Hospital, Boston, which has a capacity of 435 beds. "It is quite possible that bread might be purchased at a slightly less price, but as the hospital would still be obliged to employ the same labor, no economy would result."

At the Brattleboro Retreat, Brattleboro, Vt., a 475-bed hospital, where Horace G. Ripley, M.D., is superintendent, the following opinion is offered. "It is much better, in my mind, in an institution of this size, to do our own baking."

Emily L. Loveridge, superintendent, Good Samaritan Hospital, Portland, Ore., answers, "We bake our own pastries and bread except that used for toast, and we have never succeeded in finding bread as satisfactory as our own. The quality is much better than any we can buy."

"Besides doing all our own bread and pastry baking we also bake bread for the local Santa Fe Hospital. Our bread has been much better since we have been doing our own baking, and has not, we think, cost us as much as when we contracted for it," states Ara Davis, superintendent, Scott and White Hospital, Temple, Tex.

A very brief but none the less expressive and satisfied statement was received from Louis J. Bristow, superintendent, Southern Baptist Hospital, New Orleans. He wrote, "We bake our own bread. We find it more satisfactory and less expensive."

"We bake all of our own bread, also pies, cakes and puddings, and find that while it is a little more expensive, we are better satisfied with the products we bake ourselves since the quality gained more than outbalances the small increase in cost," writes Mary V. Stephenson, R.N., superintendent, Hospital of the University of Pennsylvania, Philadelphia.

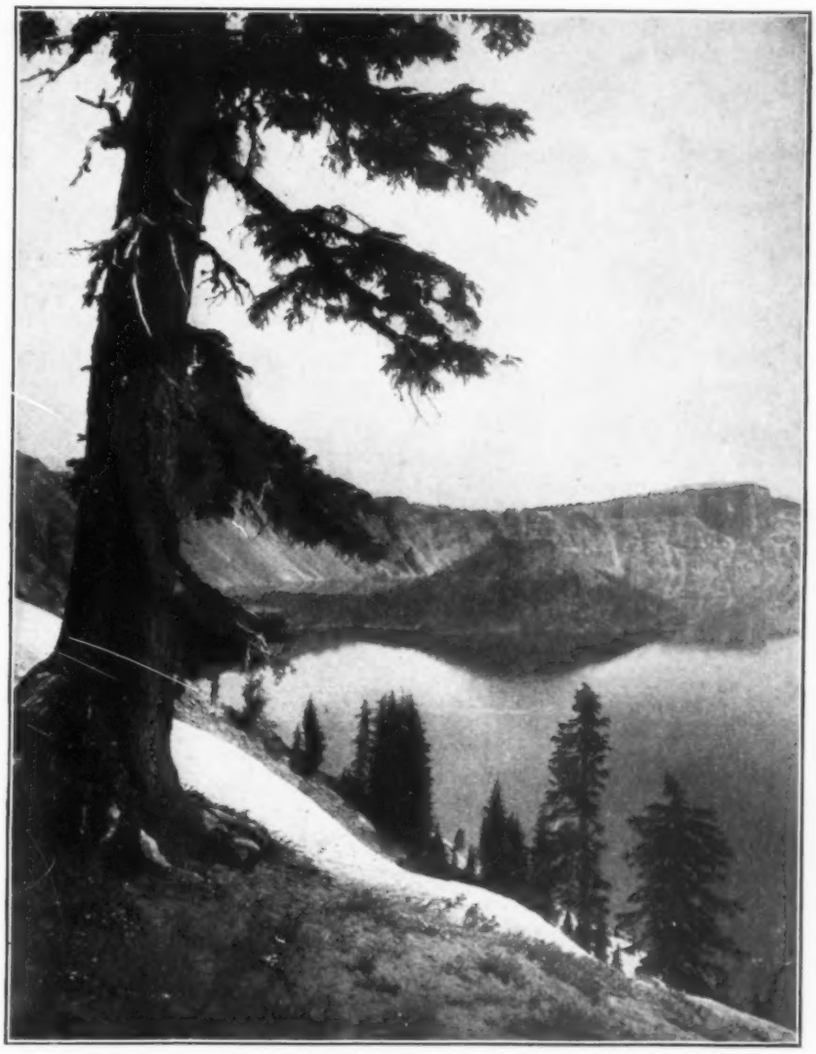
Better Bread at Better Prices

After tabulating the cost of the several items baked in the institution bakery, with bread costing four and one-third cents a pound, W. W. Leake, M.D., superintendent, State of Louisiana Charity Hospital, New Orleans, makes the following statement, "It is believed that better bread and cakes can be baked at the hospital and at a better price."

That baking in the institution will stand up throughout the years and prove practical and satisfactory has been proved at the Erie County Hospital, Buffalo, N. Y. Dr. J. D. Howland, medical superintendent, writes, "We have done all our own baking for the home and the hospital for more than twenty years and are perfectly satisfied."

"We feel that we can give our patients and employees a better quality of bread and pastries than by buying on the market," states Eugene A. Scharff, M.D., superintendent, City Hospital, St. Louis.

From the above statements and others received in answer to the questionnaires, it seems that the preparation of all bakery goods in the hospital, including bread, offers a better quality than when a contract is placed, is less expensive in most cases, and will prove satisfactory over a long period of years.



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HOW ONE DIETARY DEPARTMENT REDUCED ITS COSTS $5000 IN ONE YEAR

By Della De Long, Former Superintendent, Silver Cross Hospital,
Joliet, Ill.

WITH the possible exception of nursing, no other phase of hospital activity offers greater potentialities for doing good than the dietary department. From it patients receive a favorable or unfavorable impression of the hospital, and community good will is thereby either developed or destroyed. Similarly, the dietary department possesses, to a degree found in no other department, the opportunity to waste. The savings from other departments are either added to or used as a fund on which to draw. Such items as garbage containers can be a utility or a conveyance for lost dimes and quarters.

Because, in the writer's opinion, the satisfaction and gratitude of patients are of far greater importance than the reduction of costs, however great the need for the latter, no reasonable expense should be spared in the preparation of food or in the serving of the trays. The serving of tepid foods, or the recurrence, three time a day, of a hastily prepared tray, reacts adversely upon both the patient and the patient's friends or relatives, and hospitals suffer or gain in direct proportion to the quality of food and speed of service. This has been found an invariable rule, so that in our hospital we employ every possible means to arrange the trays tastefully, afford a generous selection of foods, and serve the food "piping" hot. Our trays number about seventy-five a day.

Attractive Trays Create Good Will

Silver Cross Hospital is constantly endeavoring to make every meal so outstanding in quality and service that it is a constant source of surprise and satisfaction to patients and employees. The dietitian has been authorized to employ every reasonable means for the decoration of the individual trays. Place cards are frequently used, a single flower often decorates the tray, while spotless linen and medium weight china are used. Silver service is used for all patients. These little things, which can be characterized only as "thoughtfulness," have proved of distinct benefit to the institution. Our patients leave the hospital thoroughly "sold" on the food service and make this fact known to their friends. Perhaps the most concrete evidence of the good will that has been developed largely through the betterment of food service, is the fact that on our recent tag day, when no special appeal was made, more than $11,000 was raised—a remarkable sum for a city of the size and wealth of Joliet.

The economies that have been effected in our dietary during the past twelve months, may be grouped under three heads, namely, the reduction of waste, the changing from individual floor to central service, and the employment of a chef. The writer believes that any superintendent working under like conditions, can, by continuity of effort and intelligent application, effect through them thoroughgoing economies.

A year ago large losses were sustained in the dietary department because of two major factors: the maintenance of three or four unlocked diet kitchens and storage rooms located on the various floors, and a lack of proper appreciation of values on the part of the working personnel. Just as an example of the waste that has been eliminated it may be said that twelve months ago the hospital was using from three to four crates of oranges a week. Today we find one and a half crates quite adequate. At the close of the day maids were wont to go home with four or five oranges in their pockets. This is impossible now because all food is stored in the central kitchen and is kept locked under the personal supervision of the dietitian.

Saving Through Garbage Inspection

Ten months ago, shortly after the new policies had been inaugurated, complaint came from the garbage man on the ground that the garbage was of little value because there was no bread in it. Upon investigation we found that the garbage man had formerly been "hired" to dispose of the garbage, his "wage" being the excess bread of the institution. Further investigation revealed that under the new policy, bread costs were about $90 in contrast to the former expense of $150 a month. The garbage man still calls for our waste material, but he is no longer "hired" with an excess of usable bread.

Floor diet kitchen service, at least in the Silver Cross Hospital, could do little else than contribute to high food costs. Under the floor service plan there was no way to minimize the stocks on hand, no possibility for accurate check on the existing stocks, and no assurance that the food was being used properly. It was necessary to supply each kitchen with duplicate stocks, to keep on hand in each diet kitchen from one to two gallons of milk, a quantity of cream, several pounds of butter, two dozen eggs, and the other essentials that make up the kitchen supply. Because this supply could not be checked and the issuance could not be governed, we would have been little short of superhuman if culinary costs had not been extremely high and if there had not been an enormous waste.

Food Checked in Central Kitchen

Now all food supplies are kept in one central kitchen where the usual daily inventories and accurate checks on supply are possible and where the dietitian can keep everything under lock, and issue only on properly signed requisition.

Another important contributing factor to the reduction of culinary costs has been the employment of a chef. Formerly a cook was employed at $100 a month and maintenance. With no reflection on her ability, it must be said that she was replaced by a chef at $175 a month and maintenance. This change has resulted in slightly increased labor costs and in economies that more than justify the additional overhead. Not only do the trays receive more careful attention and are supplied with a better quality and better prepared foods, but our raw food costs have been markedly reduced. It was impossible, of course, for the former cook to handle quarters of beef or halves of hogs. This meant that all our meat was bought ready-cut. Now we buy our beef by the quarter and pork by the hundred, with the result that an average saving of ten cents on every pound of meat is made. Steaks that formerly cost thirty-five cents a pound now

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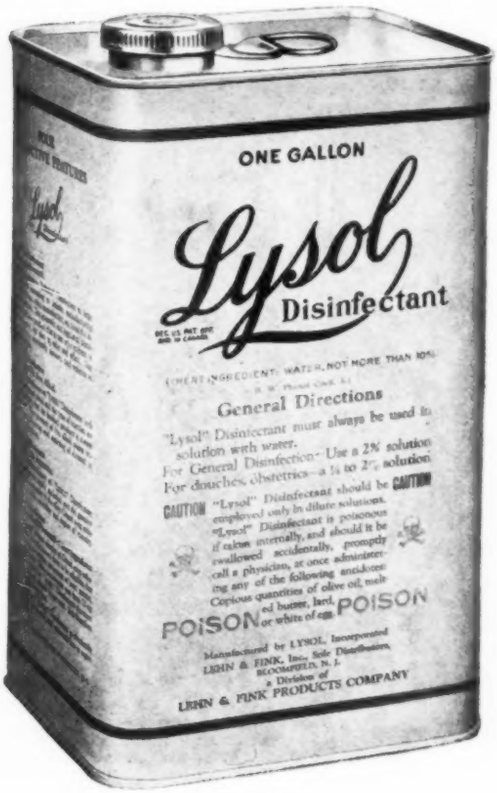

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4. "Lysol" Disinfectant is *completely soluble*, therefore uniform distribution of the germicide is certain, and contact assured.

"Lysol" Disinfectant can now be bought in bulk only from Lehn & Fink, Inc., direct. We have a New Purchase Plan to save hospitals money. Use the coupon below. Full information and special order blank will be sent immediately.

Made by Lysol Incorporated, *a division of* Lehn & Fink Products Company, Bloomfield, New Jersey.

LEHN & FINK, INC., *Sole Distributors*
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cost twenty-one cents. Since our monthly meat consumption ranges between 1,200 and 1,500 pounds, this saving, which extends from five to fourteen cents a pound and which averages ten cents, can readily be appreciated.

Formerly the dietitian did much of her marketing over the telephone. Seldom did she go to the markets and make her own selections. Such a policy contributes to high costs and a low quality of food stuffs. Under the present plan it is a part of the dietitian's duty to visit the markets not less than three times each week, thereby keeping in touch with current prices, making her own selection of foods and doing her own bargaining. This change in policy has resulted in a great saving.

A minor economy that has been effected through the change to the central kitchen and the employment of a chef has been the saving of all greases and fats from the range. Broth is skimmed and fryings are saved so that the kitchen may utilize them in making its own soft soap. During the past year we have found it unnecessary to buy soap for the kitchen, notwithstanding the fact that formerly we used more than a barrel of soap flakes each month.

Need Loyalty of Personnel

Economies can seldom be effected without the loyal cooperation and support of all employees. During the past year we have adhered to the policy of having little get-together meetings or conferences once a week. At these conferences all department heads and supervisors are present and each one is privileged to bring up for discussion any happenings or incidents of the previous week. In this way wrinkles are ironed out and adjustments made. At these conferences the department heads are constantly reminded that they, and they alone, are responsible for their respective divisions, and that only through them can economies and savings, or a betterment of the service be made.

It might be assumed by some that a hospital of 100 bed capacity would not have enough to talk about to justify and keep alive the interest in weekly conferences. The contrary is the fact. The department heads and supervisors have all manner of constructive suggestions to make, and many times little differences are caught and explained before they become large enough to develop into serious ruptures. Our conferences have been a source for the development of constructive ideas and worth while procedures. Ideas are like dynamite, in that if used properly they can be of distinct benefit to all. The conferences we have held during the past twelve months have shown the supervisors and department heads to be better qualified than anyone else to make constructive suggestions for the betterment of service or develop ideas that may result in the reduction of costs.

HOW NEW ZEALAND'S HOSPITAL SYSTEM HAS BEEN EVOLVED

New Zealand was annexed to the British Crown in 1853 when also six to eight provinces were established to deal with such local matters as the provision of hospitals. From 1853 to 1876 hospitals were a maintenance charge on provincial funds; that is, local hospitals were provided for by the local taxpayer, according to Dr. A. R. Falconer, Dunedin Hospital, Dunedin.

In 1876 provinces were abolished. From 1876 to 1886 the hospitals were governed in a variety of ways. The Dunedin Hospital and some others were under the charge of committees appointed by the general government. The patients were of the indigent class, and the expectation and hope was that the hospitals would be supported largely by voluntary donations, as in England, and only in small part or not at all by government subsidy.

While some districts (notably Dunedin) did largely voluntarily support their hospitals, other hospitals further north depended almost entirely on government aid. The inspector of hospitals criticized the position in 1885 on the following lines: That the free hospital treatment by the government was pauperizing the population to an alarming extent; that the patients were often not fit objects for charity; that the collection of maintenance money was very defective; that the management was extravagant because each locality benefited almost wholly at the expense of the central state government; that the absence of a system of subsidizing the local efforts to raise money in support of the hospital discouraged attempts to do so. He drew the attention of the government to the successful working in the province of Ontario, Canada, of an "Act to Regulate Public Aid to Charitable Institutions" in which the government contributed a fixed sum per day, and an additional sum, not exceeding one-fourth of all private and municipal subscriptions.

New legislation came into force in "The Hospital and Charitable Institutions Act, 1885." Under this act control was given to a board of trustees for each hospital, appointed by combined county councils and municipalities, who were locally assessed for the maintenance of hospitals.

By further legislation under the "Hospitals and Charitable Aid Institutions Act, 1909," hospital boards were appointed by a direct vote of the people, with power to make a direct hospital levy on the ratable capital value of the district; such rates being collected by the various municipalities and county councils on behalf of the hospital board.

The 1909 Act in New Zealand took cognizance of the report of the poor law commission in England, and charitable aid distribution and custodial care were added to the functions of hospital boards; while the dictum of the minority report of the poor laws commission "that the authority responsible for the cure of the disease should be responsible for the prevention as well" led the legislature to make the hospital board the local sanitary health authority as well.

In the 1920 Health Act this duty was taken away from hospital boards and placed under the municipality.

CHINESE NURSES PLAN NATIONAL HEADQUARTERS

The steady growth of nursing in China under the various missions is evidenced in the recent national examination held in December, 1926, in which 771 nurses took part. These were members of the Nurses Association of China which includes the qualified nurses from all countries who are working in China and now has a membership of more than 3,000, two-thirds of whom are Chinese registered nurses.

The organization is at present engaged in raising funds for a building in Hankow for its center of activities and its national headquarters. The estimated cost of the building is $25,000, which is to be raised by donations from the nurses of various countries. Up to date the headquarters has received $582 from American nurses.

In addition to providing a headquarters for the association the building will be a hostel or club for Chinese nurses who are passing through Hankow and will contain rest rooms and other accommodations for them. It is planned that the building will be self-supporting.

SURGICAL BAY'S DRESSINGS

The Cook Book and the Cook

There are many more good cook books than there are good cooks. It is one thing to read a recipe that calls for so much of this and that, mixed so and so—but it is quite another to bake a crisp, crust-dissolving pie. Only experience and a touch of genius can do that.

Plaster making, like cookery, is an art that goes far deeper than mere formulae. The adhering qualities of Adhesive Plaster, its life, its resistance to heat and humidity all depend upon the nice care exercised in its compounding. No mere formula can successfully cover all conditions and only long experience, plus an almost instinctive skill, will master the art.

Victor G. Swain, the plaster expert of The Bay Company, and a partner in the business, has devoted thirty years to the mastery of his profession.

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DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES, 7 East 54th Street, New York
and MARY A. FOLEY, Director of Dietetics, Kahler Hospital, Rochester, Minn.

THE PREPARATION OF THE BALANCED DIET*

By Mary A. Foley, Director of Dietetics, Kahler Hospital,
Rochester, Minn.

WATER, salts, vitamins, plant fiber, protein, calories—here are six considerations for a healthful diet. Water is abundant and the other elements can be supplied by the common foods on the market. Vegetables and fruits, either fresh or properly processed, provide vitamins, salts, and plant fiber; milk and milk products, such as cream, butter and cheese, add more vitamins, more salts, especially lime, and an ideal protein. Meat also yields good protein; and wheat, oats, rye, rice, corn, honey, molasses, sugar, lard and oils give calories.

One may eat to repletion day by day and yet lose weight and strength. Abundant calories will not make up for a lack of vitamins or lack of salts. Excessive vitamins will not offset inadequate calories. The common diet mistakes are made because people have not learned how to play the game of life as now conducted. In times gone by when every man had his garden, his cow and his pig, the problem was simpler. Appetite and instinct served then as fair guides. Today the appetite is led astray by fanciful cookery and superpure foods, while instinct is bewildered.

The taste for sweets is a natural instinct and has always been a strong one, but primitive man was less able to indulge it than we are. One hundred ten pounds of sugar were eaten last year by every man, woman and child in the country; this at least was the average per capita consumption, and since our capacity for food is limited this sugar has obviously replaced other foods, a net loss in vitamins and minerals because sugar contains neither of these and the foods it has replaced contained both. The consumption of wheat flour has likewise increased tremendously and this vitamin-poor substance has replaced still other vitamin carriers.

Food Faddists and Sugar

The food faddist is filled with alarm by such statistics and would turn us back to the food status of barbarians by prohibiting the use of sugar and white bread. But when the worst is said, the fact remains that sugar and milled flour are astonishingly cheap foods and as good a source of calories as any.

A little intelligence makes it possible to hold to the good in civilization and avoid the evil. The answer is to make the garden foods the basis of each meal and provide enough of them to satisfy the mineral, vitamin and fiber requirements, then to turn to the cheaper starches and sugars for the additional calories needed.

To the credit of civilization the canners have learned to preserve the garden foods in a manner that saves their vitamins, and these canned products are comparatively cheap so that no one need go without fruits and vegetables. Good whole wheat breads can be had also and these are richer in vitamins and minerals than breads made from the more highly milled wheat flours. There is much to be said for whole wheat bread but, on the other hand, whole wheat flour is more perishable and hence more expensive; furthermore, the bran it contains is sometimes too irritating. On the whole, therefore, it is the part of wisdom to accept white flour into the dietary of civilized man without undue murmuring, remembering always that the bread made from it is little more than a purveyor of calories and is no longer the staff of biblical times.

Rules for Normal Diet

What are the rules governing the selection of an ideal diet for normal people? Simply these:

1. Drink water freely.
2. Eat plenty of vegetables and fruits, for vitamins, minerals and plant fiber.
3. Include some milk and cream for more vitamins, more minerals and an excellent protein.
4. Include some meat for more good protein.
5. Fill up on sweets, breadstuffs and fats.

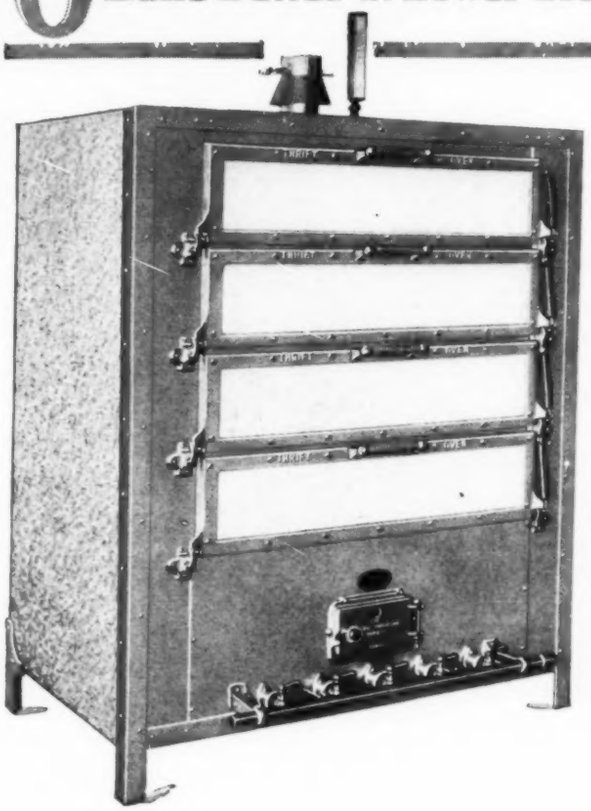
The normal or house diet is, and rightly so, the basis for all the quantitative and qualitative diets that are used in the hospital.

The standard hospital diets are the ones with which we are most familiar.

The liquid diet is used in febrile conditions, after operations, when there is a disturbance of the digestive functions causing their secretory or motor activity to remain below par, during the trying time of teeth extraction or when there is difficulty experienced in swallowing because of an infection or growth. Modifications of this diet are made to suit the individual cases; for example, liquids without milk, liquids without acids, bland liquids, stimulating liquids, high protein liquids and high caloric liquids.

Patients on liquid diets should have eight or ten feedings a day. In some of the hospitals where the dietary department is carrying a burden that is too heavy, we find liquid diets considered an unnecessary evil. No provisions are made for the breakfast feeding; broth and ice

6 Reasons why Thrift Ovens Bake Better at Lower Cost



The THRIFT Oven

1. ***Decks*** are light—easily removable, made of a smooth, stone-like, heat-retaining material.
2. ***Insulation*** is cut to fit, practically eliminating joints and insuring better fuel economy.
3. ***Doors*** close *without slamming*—stay closed without latching. Unique sealing feature prevents cold air from chilling other decks when any door is opened.
4. ***Combustion Chamber*** is insulated from lowest deck to prevent overheating. Designed to deflect heat efficiently throughout the oven.
5. ***The Siphon Flue***—a unique Thrift feature that brings about uniform distribution and more complete utilization of heat, and insures improved baking on each deck.
6. ***Burners*** heat oven rapidly, are easily adjusted and are provided with push button pilot lighting system.

If you are interested in better baked pastries, pan goods, meat dishes and other foods at lower cost, ask us to send our new bulletin MH 125.

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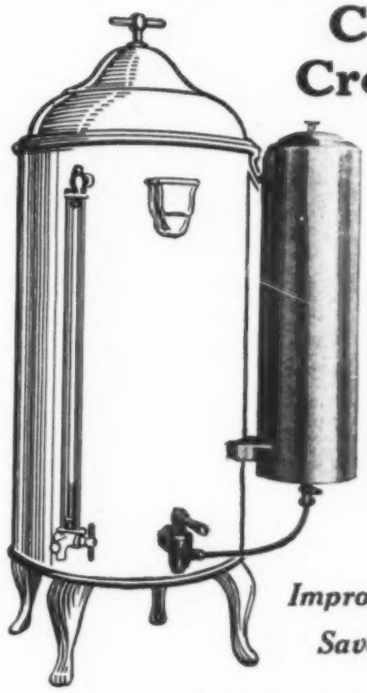
The AUTOMATIC Coffee Creamer



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HERE is the only creamer that puts the cream where it belongs—beside the coffee. The operation is simple. A turn to the left delivers black coffee. A turn to the right delivers cream and coffee at the same time in the proportion you determine. All waste is eliminated—no guesswork or spillage about it.

Fully Protected from Contamination

The Automatic Coffee Creamer will appeal to your patients. It will guarantee a full cup of creamed coffee. And the coffee will be richer and hotter because the cream is heated as it flows into the orifice and faucet and is thoroughly mulsified and blended giving that rich full flavor.

Better Coffee at Less Cost

The Automatic will appeal to you as well because it means a 25% saving of cream throughout the year and a speeding up of service. These advantages should be investigated.

The Automatic Coffee Creamer is easily attached. Write for complete information and prices.

The Automatic Coffee Creamer Co.
407 East Fort Street Detroit, Michigan

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cream are sent to the floor serving kitchens at noon, and broth and gelatin are served for the evening meal. This is supplemented with egg nogs, milk, or malted milks. Check over some of these liquid diets and you find them utterly inadequate as to calories, protein, minerals and vitamins. The dietitian should make out each day the liquid diet for the following day, have it posted in the serving kitchens and see that these kitchens are supplied with the liquid foods on the list.

HOSPITAL DIET

Type of Food	Liquid	Soft	Light
I. Fruits	Fruit Juices, Strained	Liquid Diet plus Apple Sauce Prunes Canned Peaches Canned Pears Canned Apricots	Soft Diet plus Cooked Fruits Raw Fruits Oranges Grapefruit Pears Peaches
II. Cereals	Cereal Water	Gruels Cereals Avoid Bran Cereals	Cereals Cooked Prepared
III. Breads Crackers		White Toast Crackers	Same+Bread Rolls
IV. Milk Eggs Cheese	Milk Buttermilk Egg Nog Albumin Whey Milk Modified with Lime Water Barley Water	Liquid Diet plus Eggs— Soft Cooked Poached Creamed Escalloped Baked Shirred Cottage Cheese	Soft Diet plus Eggs Scrambled Omelet
V. Beverages	Tea Coffee Cocoa Postum Caffein-free Coffee	Same	Same
VI. Soups	Creamed Soup Broth-Chicken Beef Lamb Beef Juice Beef Tea	Same	Same
VII. Meat Fish		Scraped Beef Balls Chicken-Roasted Boiled Creamed Escalloped Custard White Fish Baked Boiled Broiled Creamed Escalloped Oysters Stew Creamed Escalloped Sweetbreads Creamed Broiled	Soft Diet Plus Bacon Broiled Steak Lamb Chops Roast Lamb Roast Beef
VIII. Vegetables		Potatoes Baked Mashed	Soft Diet plus Potatoes— Boiled Creamed Escalloped Asparagus Spinach Peas Carrots Squash Cauliflower String Beans Beets Lettuce
IX. Desserts	Ices Made of Strained Fruits Ice Creams Junket	Liquid Diet plus Custards Gelatins Blancmange Tapioca Pudding Rice Pudding Sponge Cake Angel Food Bread Pudding	Same
X. Miscellaneous	Ginger Ale	Spaghetti Macaroni Creamed Escalloped Jelly Honey Noodles	Soft Diet plus Salads of Foods Allowed. Jam

The expression special diet has a variety of meanings. It may mean that the patient is a friend of a member of the board of trustees or the hospital superintendent, and therefore is to have special attention given to his personal likes and dislikes. It may mean that the patient, because of a neurosthenic or asthenic condition of long duration, requires food that will tempt his appetite; it may mean a high caloric diet, or a meat free diet. If the diet kitchen is to be burdened with all of the special diets required by the hospital patients, there will be little time, energy or room left for the preparation of corrective diets which, we know, are regarded as a decided asset to every hospital.

With a little judicious planning many special diets can be taken care of easily in the floor diet kitchens. Patients requiring high caloric diets may have the normal general diet plus extra cream, butter and fruit with the meals, and fruit juices, orangeade and a malted milk, egg nog, or glass of milk between meals. In the same way special foods may be sent to the floors to make the trays more attractive or to satisfy the craving for some particular food. Meat substitutes, made in the diet kitchen, may be sent to the floor to take the place of the meat which is on the house diet.

The Southern California Dietitians Association published in 1925, a loose leaf book entitled *The Compilation of Diets.* On page 5 of this book we find a sheet headed "Physicians' Dietary Information Sheet." The suggestion is made that a copy of this sheet be placed on the physician's desk. I feel that copies of this sheet should also be placed in the superintendent's office, in the office of the superintendent of nurses and in the dietitian's office.

Physicians' Dietary Information Sheet

Routine Hospital Diets:

Full Light Soft Liquid

Special diets that may be ordered by the name of the diet or combination:

High Bulk.

Smooth. (Cellulose soft and finely divided and rather low in amount).

Purine-free.

High iron.

Bland. (Rather flavorless, not stimulating to the appetite.)

Special Diets requiring specific information to be given the dietitian by the physician:

1. Diabetic and Epileptic—grams carbohydrate, protein and fat.
2. Nephritic—grams protein and salt, and the fluid intake. (See information given below.)
3. High Caloric—approximate number of calories, and whether full, light or soft. (See information given below.)
4. Typhoid—approximate number of calories, and whether liquid or soft.
5. Obesity—approximate number of calories, sometimes the fluid intake (if edematous), and sometimes the grams of protein.
6. Cardiac—grams of protein and salt, fluid intake and approximate number of calories.
7. Undernutrition—approximate number of calories and grams protein.

General information to aid physician in filling out above orders:

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HOSPITAL UNITS

Offer the Utmost

—safety

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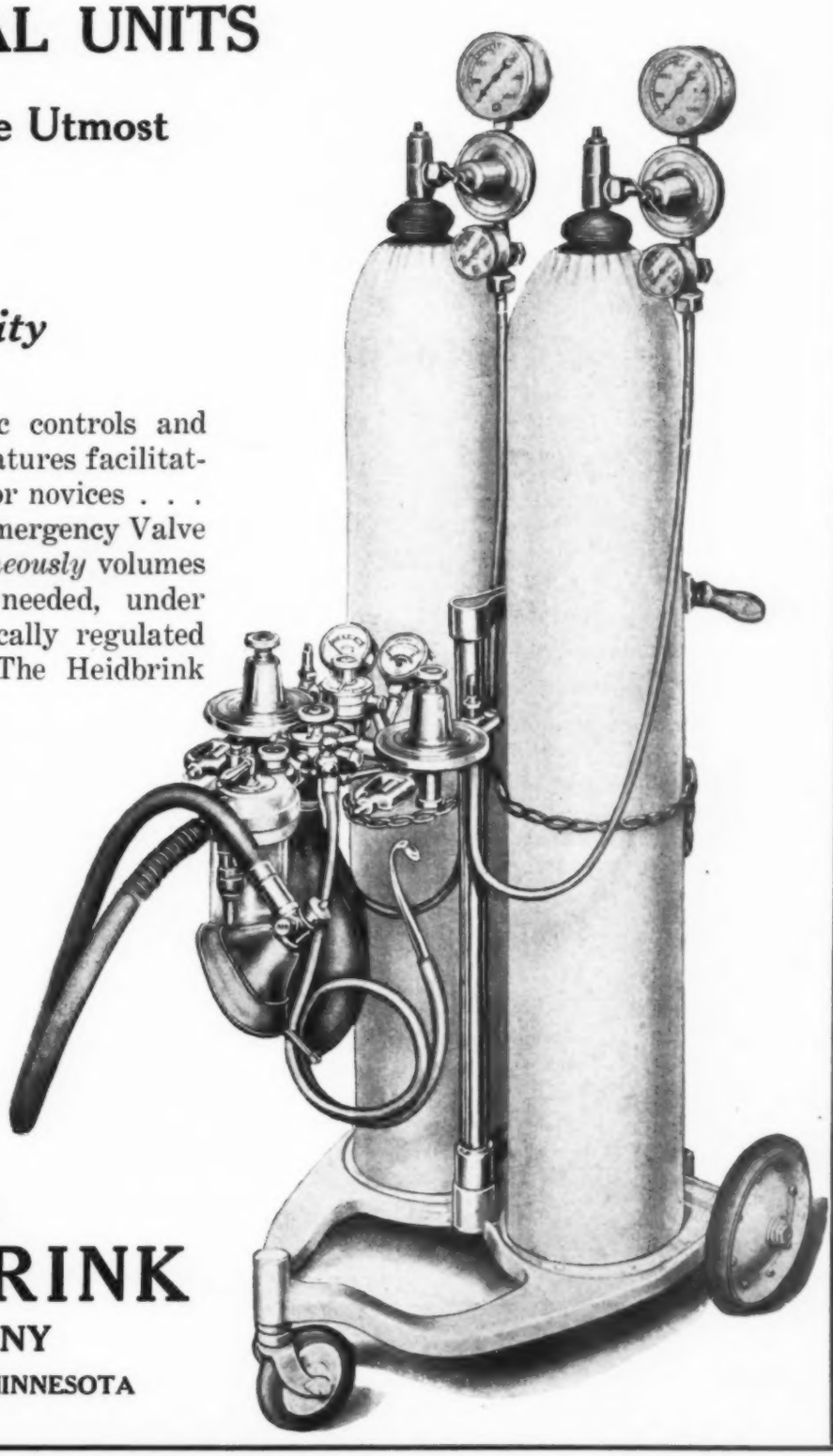
With its automatic controls and new engineering features facilitating mastery even for novices . . . with its Selective Emergency Valve supplying *instantaneously* volumes of Oxygen when needed, under pressures automatically regulated as desired. . . . The Heidbrink is naturally the choice of expert anesthetists who demand nothing short of perfect in gas apparatus for anesthesia administration.



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MINNEAPOLIS, MINNESOTA

1. Protein Requirement.
   A. Normal protein requirement:
      2 to 4 grams per kilogram (1 to 2 grams per pound) of body weight, in case of children, the higher figure being for very young children.
      1 to 1.5 grams per kilogram (0.5 to 0.75 grams per pound) of body weight for adults.
   B. Minimum protein allowance for indefinite periods of time:
      1.5 grams per kilogram (0.75 grams per pound) of body weight for children.
      ⅔ grams per kilogram (⅓ grams per pound) of body weight for adults.
   C. In acute cases:
      Less than the above minimum amounts may be given in certain acute illnesses for a period of time not to exceed three weeks.

Whenever a patient is on a low protein diet (less than normal), at least one-half the total protein provided should come from animal sources.

2. Caloric Requirements.
   A. For Bed Patients:
      30 cal. per kilogram (15 cal. per pound) of body weight for adults with normal rate of metabolism.
      50 to 80 cal. per kilogram (25 to 40 cal. per pound) of body weight for children with a normal rate of metabolism, the higher figure always for very young children.
      50 to 80 cal. per kilogram (25 to 40 cal. per pound) of body weight for adults with a high rate of metabolism or in need of a high caloric diet.
      90 to 150 cal. per kilogram (45 to 75 cal. per pound) of body weight for children with a high rate of metabolism or in need of a high caloric diet.

These figures are only averages. Some patients require more or less than these figures would indicate. The weight response should be the ultimate indicator, that is, whether there is the desired gain, loss or maintenance. Digestive capacity of patient must not be exceeded.

3. Fluid Intake.

The following foods are counted as part of the fluid intake of an individual:

Water	Soup
Other beverages	Ice Cream
Milk	Gelatin
Cream	

Normal Fluid Intake:
Adults, 3 to 3.5 quarts per day.
Children, 1.5 to 2.5 quarts per day.

These figures are only averages. There is considerable variation among people. In the absence of retention by the kidneys, the normal fluid intake in adults is the amount that will produce 1,500 cc. of urine in twenty-four hours. In children under twelve years it is the amount that will produce 700-1,000 cc. of urine, depending on size—the smaller for the smaller child.

4. Common Salt, Intake:
   a. Moderate amounts used in cooking, no salt added at the table, no salt-rich foods used—intake is 5 to 6 grams per day.
   b. If unsalted butter, salt-poor bread, and vegetables and meats boiled free of salt are used—intake is as low as 2 grams per day.
   c. If, in addition distilled water is used—the intake may be as low as 0.5 grams per day. This is seldom necessary.

Condition represented in (a) is generally advised in cases of salt restriction, (b) may be necessary in marked edema. Neither (b) nor (c) should be kept up indefinitely, however, through danger of another form of edema developing.*

Diabetes

Rapid progress has been made in the treatment of diabetes during the last decade. New diets and modifications of old diets have appeared from all different parts of the country. Sometimes we are at a loss to know what diet to use, or because we have used a certain type of diabetic diet with good results, we hesitate to use another type. Dr. Elliott P. Joslin, Boston, has made this statement: "Any method of treating diabetes will be successful in the hands of a good clinician." This statement should help us to make our adjustments more readily when we move from a hospital using low carbohydrate and high fat diets to one using very high carbohydrate and normal protein and fat diets.

Dr. Joslin's statement might easily apply to infant feeding. Every pediatrician of note has his own particular ideas which he incorporates into his instructions to mothers, and because of this, it is not advisable to include in this list a general resumé of infant diets.

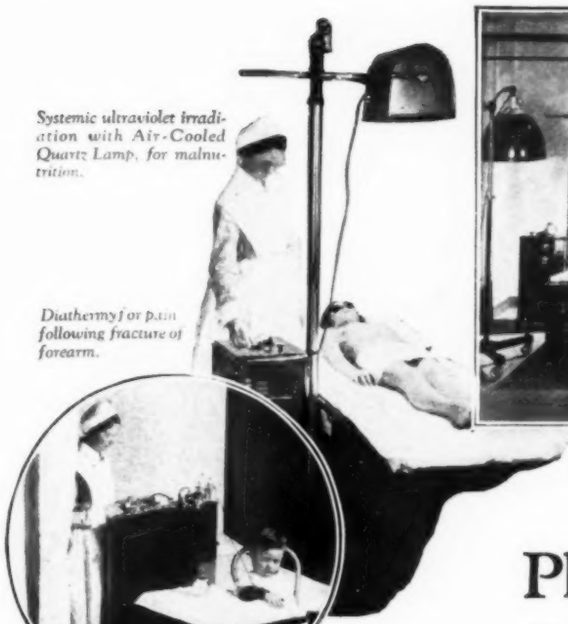
Epilepsy

For many years, diet has been an important factor in the treatment of epileptics. These diets have been varied and the results reached have not been encouraging to any marked degree. Within the last few years a new type of diet has been used with some degree of success. The object of the diet is to produce ketosis as rapidly as possible without upsetting the digestion. Ketosis, as we know, is a state in which acetone and diacetic acid are found in the blood. If ketosis is to be achieved the amounts of carbohydrate and protein in the diet must be kept very low and the amount of fat very high. The protein requirement is established by finding the normal weight of the patient and giving ⅔ to 1 gram of protein per kilogram of body weight.

The number of calories required varies according to age, weight, height, activity, sex, and climate. As a rule, thirty or forty per cent above the basal caloric requirement will furnish sufficient calories. The calories not furnished by the protein must be supplied by the carbohydrate and the fat. Frequently the sudden change from the normal or comparatively high carbohydrate diet, on which the patient has been living, to the low carbohydrate diet and high fat diet may result in nausea and even vomiting. For this reason it has been found practical to place the patient on a diet containing 75 grams of carbohydrate the first day, reducing this to 50 grams the second day and to 30 grams the third day. During this period, the fat which supplies those calories not furnished by the carbohydrate and the protein, has been increased as the carbohydrate has been decreased.

On the fourth or fifth day, the prescription is given. If nausea develops, orange juice is given until the nausea disappears. The urine is tested at intervals for diacetic acid. Once the ketosis is produced, it is necessary to weigh the patient twice a week to be sure he is not losing. If after several weighings, it is seen that he is losing weight, it is well to increase the number of calories, leav-

*By Washington State Dietetic Association. Committee—Martha Koehne; Mabel Flanley; Ethel Pipes; Louise Powley; Hazel Sprague.

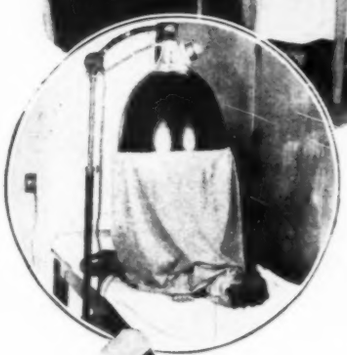


Systemic ultraviolet irradiation with Air-Cooled Quartz Lamp, for malnutrition.

Diathermy for pain following fracture of forearm.

These photographs are used through the courtesy of Northwestern University Medical School, Chicago. Above is a view of one section of the Physica Therapy Clinic, showing three of the treatment cubicles.

Sinusoidal Current for radial nerve paralysis.



Phototherapy for pain in back following muscular injury.

Ultraviolet irradiation with Water-Cooled Quartz Lamp in treatment of chronic otitis media.

Physical Therapy Apparatus Designed to Medical Ideals

IN the Dec. 11th issue of the Journal of A. M. A. were printed the Official Rules of the Council of Physical Therapy of the American Medical Association. These official rules "have been adopted primarily with the view to protecting the medical profession and the public against fraud, undesirable secrecy and objectionable advertising in connection with the manufacture and sale of apparatus and methods for physical therapeutic treatment."

Quoting further from the A. M. A. Bulletin of the House of Delegates: "It is hoped that the medical profession will give consistent support to this effort for sound therapy. Physicians may well follow in their choice of apparatus and in their work the opinions of the Council on Physical Therapy as to what is reliable."

For over thirty years the Victor X-Ray Corporation has specialized in the design and manufacture of electro-medical apparatus, and its policies have always been dictated by the ideals sought by the medical profession itself. The Victor line of Quartz Lamps, Diathermy Apparatus, Galvanic and Sinusoidal Apparatus, and Phototherapy Lamps will bear investigation by the discriminating physician who seeks quality first.

Our Engineering Service Department is ready to submit installation plans for any contemplated physical therapy equipment. Why not draw on their experience in working out installations for hundreds of other hospitals?

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ing the ratio of ketogenic to antiketogenic elements the same.

In her zeal to make the meals attractive to these patients, the dietitian must not overlook the importance of the mineral and vitamin requirements.

Ulcer

As the exact cause and the pathogenesis of ulcer are unknown, the treatment must necessarily be directed chiefly towards the predisposing factors. A diet must be arranged that will give the stomach the greatest amount of secretory and motor rest, and at the same time supply the patient with sufficient nourishment. This is secured by giving a bland diet; one which causes no chemical, mechanical or thermal irritation to the stomach. The Lenhartz and the Sippy Diets have been used, and recently we find a modified form of the Sippy Diet quite popular.

Modified Sippy Diet

Second Week: Very small meals are substituted for the ounces of milk and two ounces of cream) taken every hour, commencing at 7 a. m. and continuing through 9 p. m. The powders are taken at the half hour.

Second Week: Very small meals are substituted for the milk and cream feeding at 8 a. m., 12 noon, and 6 p. m. These meals consist of only cereal, cream soups, and custard; toward the end of the second week a small bowl of milk toast is added.

Example:

8 a. m. 4-5 ounces fine cereal
2-5 ounces fine cereal
1 scant teaspoonful sugar

12 noon 4-6 ounces cream soup (flavored with any vegetable except tomato)

6 p. m. Same as 8 a. m.

Cereals should be cooked from two and one-half to three hours in a double boiler, and strained.

Third Week: Baked potato, toast (dry), soft cooked eggs and gelatin are added to the second week diet.

Example:

8 a. m. Fine cereal—cream—sugar
1 large slice (or 2 small slices) toast
1 square butter
1 poached egg

12 noon Cream soup
Baked potato
Toast
Butter
Custard

6 p. m. Creamed rice
Toast
Butter
Soft-cooked egg
Plain gelatin with whipped cream

Fourth Week: Stewed fruits (such as prunes without skins, apple sauce, baked apple without skin, pear sauce) and ground or puréed vegetables (peas, string beans, asparagus, carrots, spinach, lima beans) are added to the Third Week diet. Caffein-free coffee may also be added if the patient desires a coffee substitute.

Example:

8 a. m. 3 prunes without skins
Cereal—cream—sugar
Toast
Butter
Soft-cooked egg
Caffein-free coffee—cream, sugar

12 noon Cream soup
Baked potato
Ground spinach
Toast
Butter
Soft custard in gelatin

6 p. m. Creamed rice
Poached egg on toast
Toast—butter
Strained pear
Baked apple (without skin)

Ten or fifteen years ago, the postoperative ulcer patient was sent home with the idea that his ulcer was removed, and that he could eat when he wanted to, and what he wanted to, and that he was on the high road to recovery. The psychololgical effect of such an idea was excellent, but experience has taught us that the patient returned home, resumed his old food habits, continued to smoke and chew as formerly, and in some cases, to increase his daily consumption of alcohol. From an educational point of view, this was not good judgment, as hospitals are centers from which education should be disseminated. In our effort to spread the food gospel, we have in many cases leaned too far the other way and have overemphasized the diet after operation, in fact have sent the patient home with a food or diet complex. With these patients, it is essential that we do not permit the pendulum to swing too far in either direction, but that we give them sound, practical advice applying to their particular cases.

Diet Following Operation for Ulcer of the Stomach or Duodeum

First Day:

(First Day of diet, not first day of operation).

Anything given must be entirely at the order of the doctor in charge.

Second Day:

If the patient is doing well, the following foods may be given:

7:30 a. m. 1½ oz. oatmeal jelly and tbsp. rich milk.
10:30 a. m. 2 oz. junket
1:30 p. m. 1½ oz. oatmeal jelly and 1 tbsp. rich milk
4:30 p. m. 2 oz. junket

Third Day:

7:30 a. m. 1½ oz. oatmeal jelly and 1 tbsp. rich milk
9:30 a. m. 2 oz. milk and cream
11:30 a. m. 2 oz. junket
1:30 p. m. 2 oz. milk and cream
3:30 p. m. 2 oz. junket
5:30 p. m. ½ oz. oatmeal jelly and 1 tbsp. rich milk
7:30 p. m. 2 oz. milk and cream

Fourth Day:

7:30 a. m. 2 oz. cereal jelly and 1 oz. rich milk
9:30 a. m. 3 oz. milk and cream
11:30 a. m. 3 oz. cream soup
1:30 p. m. 3 oz. milk and cream
3:30 p. m. 3 oz. junket
5:30 p. m. 3 oz. steamed custard
7:30 p. m. 3 oz. milk and cream.

Fifth Day:

7:30 a. m. 2 oz. cereal jelly and 1 oz. cream
9:30 a. m. 3 oz. milk and cream
11:30 a. m. 2 oz. cream soup and 1½ oz. steamed custard

The indispensable daily quart

One of the outstanding food authorities of the country makes this recommendation, in the interest of the public health:

"It is my custom to urge that the nearer every person—child and adult alike—approximates a consumption of one quart of milk a day, the better off he will be."

As you doubtless know, one of the most tempting ways to take this "daily quart" is in the form of delicious custard-like junket desserts. Junket requires no cooking, is delightfully appetizing, and with fruits and dainty toppings can be varied indefinitely. Thoroughly wholesome—readily assimilated by the most sensitive digestive system.

Junket

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makes Milk into

DELICIOUS DESSERTS

Junket is sold in two forms: tablets unsweetened and unflavored; and in powder form sweetened and flavored—special pound cans for hospital use.

You cannot fail to find helpful information regarding diets for both the sick and the well, in "Junket in Dietetics," by Helen Clarke, M.S., Director of Dietetics, The Clifton Springs Sanitarium and Clinic—we shall be glad to send it to you.

Junket and Milk Partners in Health

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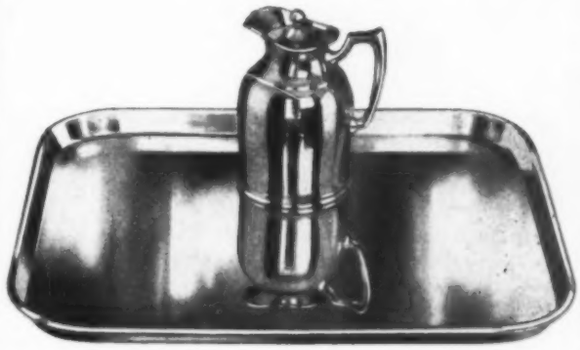

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Will Not Soil Linen

Reduces cleaning costs, not only of the trays themselves but of the linen. All that is necessary to produce an absolutely clean and sanitary PERMALIUM Tray is to wash it in the same manner as any nickel plated article. No scrubbing with steel wool or abrasive powders is necessary.

PERMALIUM Trays are made in various sizes in Oval, Round and Rectangular Shapes.

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1:30 p. m. 3 oz. milk and cream
3:30 p. m. 3 oz. junket
5:30 p. m. 2 oz. blancmange—1 oz. cream
7:30 p. m. 3 oz. milk and cream

Sixth Day:

7:30 a. m. 3 oz. cereal jelly—1 oz. cream, ½ tsp. lactose
9:30 a. m. 3 oz. milk and cream
11:30 a. m. 2 oz. cream soup—2 oz. custard
1:30 p. m. 3 oz. milk and cream
3:30 p. m. 3 oz. milk and cream
5:30 p. m. 2 oz. creamed cereal—2 oz. custard
7:30 p. m. 3 oz. milk and cream

Seventh Day:

7:30 a. m. 3 oz. cereal jelly—I oz. cream—½ tsp. lactose
9:30 a. m. 3 oz. milk and cream
10:30 a. m. 2 oz. cream soup—2 oz. gelatin
3:00 p. m. 4 oz. milk and cream
5:30 p. m. milk toast (slice toast and 3 oz. milk)
8:00 p. m. 4 oz. milk and cream

Eighth Day:

7:30 a. m. 3 oz. creamed cereals—1 oz. cream—tsp. lactose
9:30 a. m. 4 oz. milk and cream
11:30 a. m. cream soup—poached egg—2 oz. junket
3:30 p. m. 4 oz. milk and cream
5:30 p. m. milk toast (slice toast and 4 oz. milk)
8:00 p. m. 4 oz. milk and cream

Ninth Day:

7:30 a. m. cereal jelly or fine well cooked cereal—2 to 4 oz.—1 oz. cream—tsp. sugar—½ slice buttered toast—poached or soft cooked egg
9:30 a. m. small glass milk and cream
11:30 a. m. cream soup—small baked or mashed potato—slice toast—square butter—custard or some soft pudding
3:30 p. m. small glass milk and cream
5:30 p. m. 2 to 4 oz. fine, well cooked cereal, cream, tsp. sugar, ½ slice toast, ½ glass milk, ½ square butter
8:30 p. m. small glass milk and cream

Tenth Day:

7:30 a. m. same as ninth day with ½ glass milk
9:30 a. m. small glass milk or milk toast
11:30 a. m. small baked or mashed potato—cream soup—apple sauce (without skins)—½ slice buttered toast—½ glass milk
3:00 p. m. glass milk and cream or milk toast
5:30 p. m. small baked potato—slice toast—butter—½ glass milk—custard—junket
8:00 p. m. small glass milk

Eleventh Day:

7:30 a. m. prunes (without skins) cereal—cream—tsp. sugar—toast—butter—poached egg—glass milk
11:30 a. m. small baked or mashed potato—creamed chicken or fish or scraped beef balls—toast—butter—glass milk
3:00 p. m. glass milk
5:30 p. m. cream soup—custard—poached egg on toast—glass milk

Obesity

The country is flooded with literature relative to reduction diets. In an article of this type, it is not necessary to give the causes of obesity. We know that if the amount of food consumed exceeds the energy demand, the excess is stored in the body as fat. Our method at the Kahler Hospitals has been this: We record the patient's age, normal weight, height and sex; and, using a monographic chart, we construct the basal caloric requirement. One and one-half grams of protein per kilogram of normal weight is given. Example: A woman, forty years old, five feet, six inches tall, normal weight 152 pounds, present weight, 210 pounds. Her basal caloric requirement is 1510 calories, and one and one-half grams of protein per kilogram of normal body weight gives her 105 grams of protein.

Experience has taught us that rapid weight reduction is not practical. One or two pounds a week is enough, unless the patient is being reduced prior to an operation. Resting periods, when the weight is held constant, should be taken between every fifteen or twenty pounds weight loss. This is advisable for two reasons: first because it gives the body an opportunity to adjust itself to the weight loss and, second, it gives the skin an opportunity to become adjusted.

Reduction Diet

Food	Gms.	Protein	Calories
Whole Milk	400	12	272
Bacon	20	3	100
Eggs (2)	..	12	160
Meat	240	60	564
Vegetable, 5 per cent	200	2	32
Vegetable, 10 per cent	200	2	56
Fruit, 10 per cent	200	2	88
Bread	40	4	100
Butter	15	..	127
Cheese	16	4	20
		101	1519

Breakfast:
Orange—75 grams
Crisp bacon—20 grams, weighed cooked
Poached eggs—2
Toast—20 grams
Butter—5 grams
Coffee

Dinner:
Roast lamb—120 grams
Carrots—100 grams
String beans—75 grams
Head lettuce—25 grams
Mineral oil dressing—30 grams
Bread—10 grams
Butter—5 grams
Peach—75 grams
Milk—200 grams

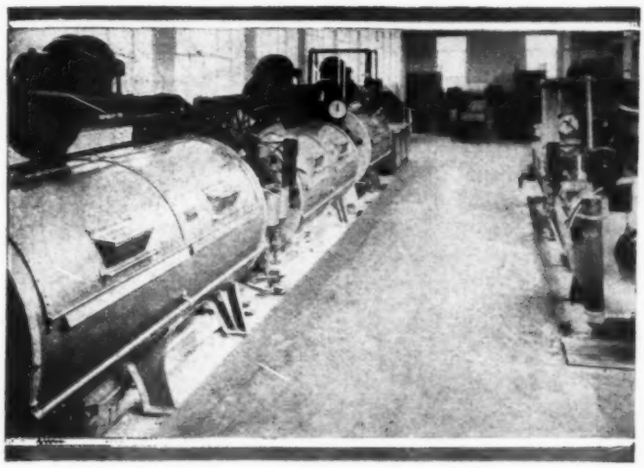
Supper:
Baked halibut — 120 grams
Tomatoes — 75 grams,
Cheese—16 grams
Beets—100 grams
Celery Hearts — 25 grams
Grapefruit—50 grams
Milk—200 grams
Bread—10 grams
Butter—5 grams

Ulcerated Colitis

Until recently, the diet for ulcerated colitis consisted of bland, high protein, non-residue forming foods. Those of us who have followed these patients over a period of several months, know how frequently the patient lost his appetite, or refused to eat, or ate foods of the non-nourishing type. Now that we have the serum treatment for ulcerated colitis, this procedure is not necessary except during the acute stages of the disease.

Pernicious Anemia

The article on "Treatment of Pernicious Anemia by a Special Diet" by George R. Minot, M.D., and William P. Murphy, M.D., Boston, in the August 14, 1926, issue of the *Journal of the American Medical Association*, brought a ray of hope and encouragement to the patients with pernicious anemia, and to the doctors, nurses, and dietitians who are so keenly interested in their welfare.



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A Manual of What to Do

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This is the new book entitled

"THE NAMES AND USES OF SURGICAL INSTRUMENTS"

The book is exact, concise, explicit. It tells the nurse in the operating room exactly what to do and how to do it. It is unique.

The Educational Department of Frank S. Betz Company has published this book for free distribution to hospital superintendents and head nurses.

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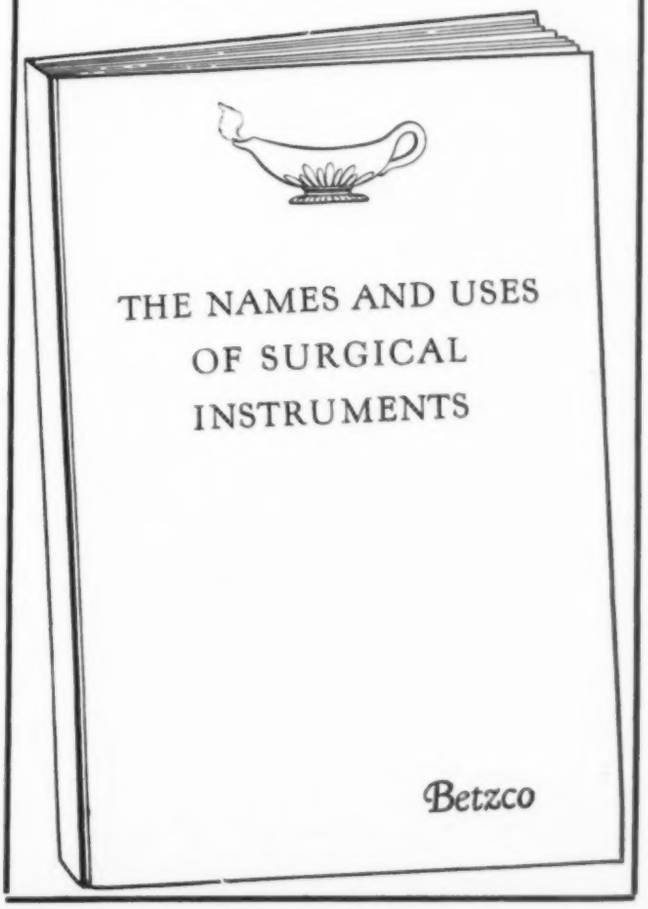

NURSING AND THE HOSPITAL

Conducted by M. HELENA MC MILLAN, R. N.,
Director, School of Nursing, Presbyterian Hospital, Chicago

THE UNIVERSITY AND NURSING EDUCATION*

By Franklin C. McLean, M.D., Professor of Medicine, University of Chicago,
Chicago

IN 1916 it was pointed out by M. Adelaide Nutting that there were only two endowed schools of nursing in the world. One was the Nightingale School at St. Thomas Hospital, London, founded in 1860, with an endowment fund of approximately $200,000 given by Florence Nightingale. This was not only the first endowed school of nursing, but was also the first organized school of nursing of any kind, and it created and set in motion the whole modern system of training schools and of nursing. The second endowed school was the Department for Graduate Nurses at Teachers College, Columbia University, New York, endowed by Mrs. Helen Hartley Jenkins. At this time there were approximately 1100 schools of nursing in the United States alone.

The whole system of nursing education thus formed, and still forms a sharp contrast with other forms of education. While colleges, medical schools, universities, and many other educational organizations of recognized value to the community depend for their continued existence upon endowment, support from public or private funds, and tuition fees, the whole system of nursing education is an integral part of our hospital system, and it rests primarily on the economic fact that hospitals find the establishment of training schools to be the least expensive way in which they can provide the necessary nursing service for their patients. With this in mind it is not surprising that in a majority of training schools education of nurses is subordinated in varying degrees to the demands of the hospitals for the services of pupil nurses.

Early Recognition of Need

Long before 1916 this condition had received some attention and study. As long ago as 1876 a report of the Bellevue School of Nursing, New York, outlined a plan for a college of nursing, into which it was thought that the school might develop. In 1903 Dr. Alfred Worcester published an article in "The University of Chicago Record," in which he declared that the university is the only place where nursing education can be properly carried on. In 1905 Oldfield, writing in the *Westminster Review*, advocated the granting of degrees in nursing, and advised the degree of bachelor of nursing with a distinctive hood and gown.

Miss Nutting's 1916 address, entitled "A Sound Economic Basis for Schools of Nursing" may, however, be taken fairly as the turning point in the attitude toward nursing education, the newer conception of which is so well represented by the group present here today, for since the date of that address there has been a decided tendency toward improvement in conditions. At least five endowed schools of nursing have been established, and perhaps ten or fifteen others are receiving support from public or private funds, which puts them in the same economic class with the endowed schools. Meanwhile the total number of schools in the United States has increased to something over 1800 so that the proportion of schools of the newer type remains exceedingly small.

Report of Rockefeller Committee

Stimulated largely by the efforts of Miss Nutting, a committee for the study of nursing education was appointed by the Rockefeller Foundation, and after an exhaustive study and survey the committee's report was published in 1923 under the title "Nursing and Nursing Education in the United States." With the publication of this report, and the establishment of what may be called an experimental school of Nursing at Yale University, New Haven, Conn., the movement for improvement may be said to have been well launched. With the developments that have occurred since then we may consider that the first steps toward improvement have been taken, and we need only examine nursing education critically in the light of this movement to determine our attitude toward the future.

The problems of nursing education divide themselves naturally into two groups, economic and educational, although it will be seen that no sharp line can be drawn between the two. The economic aspects are subject to further division. We have the economic aspects of nursing in general, which affect the whole population. While we are concerned only indirectly with this phase of the subject today it should be pointed out that this council is not indifferent to the needs of the public, as is shown by its endorsement of the hourly nursing service recently established in Chicago.

There is also to be considered the economic need of the nurse in training. There can be no doubt that the best of our hospital training schools have made it perfectly clear to prospective students that they were to pay for their education and training in services rendered to the hospital, and there can be no doubt that in at least a fair proportion of cases this has constituted a fair exchange,

*An address delivered before the Central Council of Nursing Education, at Chicago, Ill., January 31, 1927.

Cutting Labor Costs in Half!

Another stupendous contribution to hospital kitchen economies has just been made by the manufacturer of the nationally known Perfect Automatic Egg Timer. For the first time in history there is available a *combination French Fry-Julienne cutter, slicer and cuber—all in one machine!*

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The Perfect Automatic Food Cutter is the result of years of experiment and engineering research. Its highly original and fully patented "tri-plex" knives can be adjusted to cut *any desired shape and thickness at one time.* The Perfect is completely automatic. Simply fill the hopper and turn the handle. Unusually wide knife-edges assure speed and quantity production. Hardened roller bearings make for ease of operation and quiet performance. This machine is absolutely distinctive in its field. It has no rivals. Write for prices and further information.

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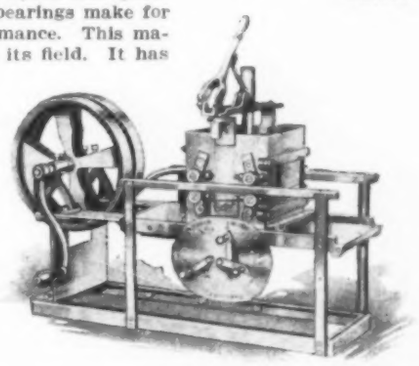

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This System is exceedingly simple as will be shown in the illustration.

The Special Noiseless Aluminum Chart Holders are hung one behind the other and the one in the rear just enough higher than the one in front to see the physician's name, the patient's name and room number at the top.

The Nurse sees all these name plates at the top at a glance and selects the right chart holder without delay or mistake.

Write today for prices

Visible Clinical Record Chart Desk C.A.6

32 in. high, 37 in. wide, 19½ in. deep

To Hold Thirty Special Noiseless Aluminum Book Form Chart Holders

Rack size 29⅞ in. wide over all; 10 in. deep

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and that it has enabled many worthy students to secure education and training which otherwise would have been beyond their reach. At the same time it is also clear that this system has been exploited by many of the weaker schools to such an extent that the training given has been in no sense a fair exchange for service rendered. The system, in general, is open to the criticism that as a rule no distinction has been made in the curriculum or plan of work as between activities that are educational in nature and those that consist only in rendering service for which the hospital would otherwise have to pay, so that it is difficult to determine in individual cases whether the nurse or the institution has profited most by the arrangement. Suffice it to say here that the system has supplied us with practically all of the present nursing profession, and that if properly administered, perhaps in a modified form, it can be made to continue to be of great service both to the individual nurse and to society.

The chief economic need that concerns us today, however, is that of the school of nursing itself. Those within the schools are growing more and more conscious of the shortcomings of the system, particularly as it affects educational policies and methods and, working from within, they are attempting to remedy the conditions that exist. Without independent financial support for the schools, and with the schools under direct hospital management, they have found it difficult and in many cases impossible to secure relief when such relief involves the hospital in increased expense. The economic question becomes an acute one, and financial independence in the form of endowments or of public or private support has been sought.

The question is also partly one of management. With the schools entirely under hospital control, it is perhaps too much to expect that the educational point of view will be taken by hospital boards of trustees, even though separate funds for nursing education be made available. A corollary of the desire for endowments is, therefore, a desire for educational independence, which involves at least a certain degree of administrative independence, and this independence seems to have been achieved in varying degrees in all of the schools that have attained some financial independence.

The Relation to the University

Thus far we have not mentioned the university, but we may now well inquire as to how the university is concerned with the questions we have set forth. It is clear that the desiderata of economic, educational and administrative independence may, in theory at least, be attained without bringing the university into the matter at all. Some of them have, in fact, been attained already by such schools as the Illinois Training School for Nurses, Chicago. From the purely economic viewpoint it would appear that the contribution of the university would be the provision of educational facilities already provided for within the university organization without unnecessary duplication of resources, and furthermore that the university can contribute financial stability, responsibility, and the confidence of the public as the natural custodian of funds to be provided for education in various forms. But there would hardly be an excuse for my presence here today if the union between the universities and nursing education, which is now progressing, were solely upon economic grounds, and it therefore behooves me to turn at once to the more strictly educational principles involved, which form the real and proper basis for the union.

Someone has remarked that "medical education, after all, is education, not medicine," and the same principle may be applied to nursing education. The university comes into the problem without much knowledge of or experience in the actual practice of nursing, but in undertaking its program it must naturally base its policies on what may appear to be sound educational principles. The procedure to be adopted will naturally vary with the institution, but in the training of nurses it may at least be expected of the universities that they will not include in the curriculum types or amounts of service that are not definitely educational in value and that they will give more freedom of election to students than has heretofore been possible.

I cannot pass this point without calling attention to a definite danger that exists. In withdrawing from the curriculum the types of service which have made it possible for the hospital training schools to maintain themselves, the universities must not withdraw from the nurse in training the opportunity of meeting her own economic need. I have given some consideration to this problem, and while I am not in a position to offer a solution I have as yet failed to grasp the nice distinction between a nurse who earns her expenses by making dressings and the student who earns his way through college by waiting on table. Make the distinction between educational and non-educational activities, by all means, but let the nurse who must earn her way make dressings if she elects to do so.

An Independent Nursing School

Again, what we have said so far has been limited to the undergraduate training of nurses, and looked at from this angle alone it is doubtful whether the addition of the educational problems to the economic ones would be sufficient to cause the union between schools of nursing and the universities to be necessary, even if desirable. In this country we are at last coming to recognize the difference between a college and a university, and to feel that the independent college has a real place in our civilization. If this be so, why not the independent school of nursing? To my mind, granted some degree of administrative independence from the hospital, this type of school will be the backbone of our nursing system for many years to come, and the proper development of it should receive the attention it deserves.

Webster's dictionary defines the university as " an institution organized for teaching and study in the higher branches of learning," and then goes on to say that "in the United States a university typically comprises a college besides one or more graduate or professional schools, although the name of university has suffered from inaccurate application to institutions of no more, sometimes even of less, scope and equipment than a college." The conception of the university with which I am dealing is that of an institution of higher learning, and in accordance with this conception the real function of the university school of nursing must be construed as including something more than an undergraduate school. It should include an undergraduate school, and this school should be so conducted as to be a model, economically and educationally, for the many hospital and independent undergraduate schools which will continue to be necessary. If so conducted it will have a real influence on our whole system of nursing and nursing education, and an influence which will tend for improvement in both. But the university school of nursing will extend its activities beyond the undergraduate curriculum and thus justify its existence within the university.

The report on "Nursing and Nursing Education in the United States" called attention to the very meagre facilities at present available for the education and training of nurses for positions of standing and leadership in the

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nursing profession. There are today increasing demands for nurses for such positions and these positions require not only intensity of training and experience but also breadth of education and viewpoint, attributes which should be developed within the universities. We must therefore look to the universities for this broader outlook on nursing education, and unless the universities provide it, they will have failed signally in contributing to the solution of the problem.

This means that the graduate nurse in search of further training should find in the university not only technical and practical courses in the various special fields of her profession, but that she should have free access to the sciences and humanities, for the functions of the nurse are extending in varied directions. But it must mean more than this, if the university is to exercise its peculiar function in higher learning. It must mean that not only the technical procedures involved in the nursing profession must constantly be subjected to scrutiny with the purpose of improving them, but that the whole problem of the social aspects of nursing in their relation to human welfare must be constantly inquired into. By coming into the university the nursing profession brings with it all of its problems, and it must expect to have these problems held up to the critical view of the other university faculties, and to the limelight of public opinion. Only by this process can we expect to hold fast to that which is good, and to make further progress. That this may be painful at times has been shown by the experience of medical education, but if sacrifice of preconceived ideas is demanded, this sacrifice must be made in the interest of the greatest good to humanity.

I have attempted to picture the university as an agency in improving not only the educational status of nursing education, but first and foremost as an agency in the development of a new outlook on the functions of the nursing profession in its relation to society. In so doing I have avoided such details as those of entrance requirements, of curriculum, of "what should be taught to the nurse," of methods of teaching, of hours of duty, and of the scope of nursing activities. While viewing the whole of nursing education as a problem, and a problem in which there is at present intense interest, I have tried only to indicate in what directions the university may attempt to aid in the solution of the problem, rather than to predict the solution itself.

Although I have until now restricted my remarks to the university, in the abstract, I am informed that many of you will wish to have some authoritative statement as to what the University of Chicago, in particular, proposes to do with respect to the problems I have indicated. Being without authority myself, I can do no better than to quote verbatim from President Mason's convocation statement of June, 1926, as follows:

The University of Chicago School

"The University of Chicago is now in the process of organizing a school of nursing leading to the degree of bachelor of science. It will be the aim of this school to raise the standard of nursing education and to prepare its graduates and other qualified graduate nurses for positions of standing and leadership in the nursing profession, including executive, teaching, public health and other forms of service. It will require a large sum, not less than $1,000,000, to provide endowment for this undertaking.

"A very significant beginning has already been made upon this plan through the gift of approximately $500,000 which is provided for in an agreement just concluded with the Illinois Training School for Nurses. This institution, which has been preëminent in its field of nursing education in the Middle West for almost half a century, has agreed to turn over to the university all of its properties in furtherance of the school of nursing. This agreement provides for ample time within which the present service which the Illinois Training School renders to the Cook County Hospital may be taken care of and the interests of the Cook County poor in that institution safeguarded.

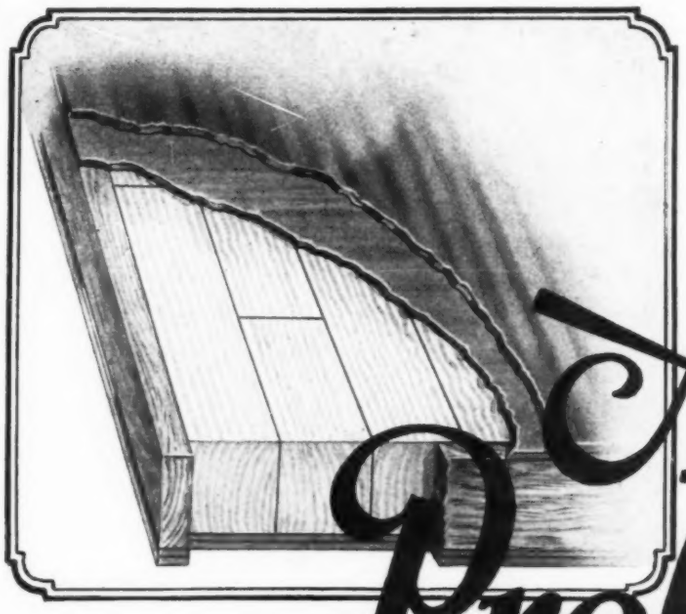
"Organized in September, 1880, the Illinois Training School has had the devoted attention of many of the leading women of this community and the support of many of its citizens. It has graduated over 1,700 women into the profession of nursing, many of whom are now rendering distinguished service in their chosen field. It is especially gratifying to the university that these women of Chicago are entrusting their resources and this heritage into the hands of the university for the splendid cause of developing the field of nursing education."

Summer Courses for Graduate Nurses

Since these words were written last June a beginning has been made by the University of Chicago, through the organization of summer courses for graduate nurses on a continuing basis, and the emphasis for the immediate future will remain on higher education and special training for graduate nurses. In the meantime the university will inaugurate its hospital work with a staff of graduate nurses under the direction of those who are to direct the school of nursing. It is expected that as soon as the hospital is operating smoothly under its regular staff and as soon as the necessary resources are available a beginning will be made in the training and education of undergraduate nurses under a plan by which each student will be required to complete two years of junior college work before admission to the school of nursing, and by which, on completion of the nursing curriculum, she will be given a bachelor of science degree. With a regular salaried staff in attendance in the hospital it will be possible to assign pupil nurses to duty on the basis of the educational value of this service alone.

It should be repeated that in order to make an outstanding contribution to the problems of nursing education the university will require large resources. The resources to be derived from the Illinois Training School for Nurses form only a part of what will be needed. In addition at least half a million dollars will be required before even an adequate beginning can be made, and the expansion of the work will naturally require substantial additions to this sum. The University of Chicago is also faced with the immediate problem of providing suitable housing facilities for pupil nurses and for the educational and administrative staff. To provide for this need an additional half million dollars is required, and an opportunity for the creation of a magnificent memorial is offered. Eventually also the school will require provision for an educational building, although at the beginning the facilities already provided within the university will be sufficient to take care of the needs of the school of nursing.

The enterprise must be considered as a cooperative one, participated in by the community and the University of Chicago. The university assumes this burden and responsibility because it believes that by so doing it is responding to a real need and a real demand on the part of the community. It cannot succeed without sympathy, understanding and helpful criticism on the part of the community, nor can it succeed without the material resources which only those interested in the success of the undertaking may be expected to provide.



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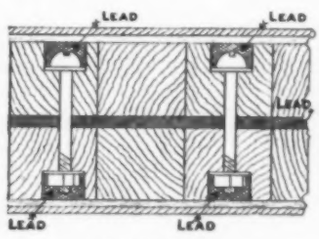

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THE HEALTH CENTER*

By Michael M. Davis, Ph.D., and Anna Mann Richardson, M.D., Committee on Dispensary Development, United Hospital Fund of New York,
New York

THE term "health center" has been given many different meanings. Its broadest application has been to a community organization for both preventive and curative medicine, centering around a hospital as its institutional expression, and around an organization of medical men, health authorities, and laymen, as the means whereby the institutional facilities might serve the whole local population.

A comprehensive health center program of this sort was proposed for England a few years ago by the Ministry of Health. In a somewhat modified form, but under the same name, a similar program for New York has been proposed to the legislature by the State Health Department, but has not yet been enacted. The much discussed "community hospital" for small towns and rural areas, is often referred to as a health center.

This broad meaning of the term may become generally accepted when such plans are fully realized in practice. But at present this is not the case. Even in its more usual and restricted meaning, the term health center needs analysis before definition. The kinds of clinics and educational activities that the term designates are so varied in different communities, and even within New York City, that some historical review and examination of common characteristics are necessary.

As methods in any field of service are gradually tested and standardized, the emphasis shifts from experiment and research to extended application. As soon as certain methods of controlling tuberculosis or infant mortality had proved effective, the primary question facing the promoters of these movements became, how shall the methods be applied so as to reach the greatest possible number, and ideally, the whole population? This states in an interrogative way the first of the two essential ideas behind the health center, namely, the aim to serve intensively or effectively the people of a defined area. Service to the people of a specified district is one health center slogan.

A second root idea in the history of health centers in this country is that of the coördination of medical and health services. The organized health movements, which have spread like waves over the United States during the last twenty years, have each begun as a specialized activity dealing with tuberculosis, infant and maternal mortality, venereal disease, mental disease, or child health, and each has tended toward having its own specialized staff. To a certain extent this has been wholesome and necessary, but after the experimental stage the application to a small local area of several specialized medical and health programs becomes confusing and self-defeating. Coördination of clinic services and home visiting services in given areas was an outstanding problem before the War, to which the health center idea frequently seemed to offer a solution.

Activities of Tuberculosis Workers

During the formative period, from 1910 to 1915, the effort to relate services to a definite population or district began to take practical shape. In Pittsburgh the tuberculosis workers, under the leadership of Dr. William Charles White, started significant activities and began to formulate their philosophy. In Cincinnati, a health-center program was likewise begun by the tuberculosis workers; in New York, in the child health field, by the New York Milk Committee; in Milwaukee, in the same field by the city administration under Wilbur C. Phillips; in Philadelphia, also by child health workers, directed by Dr. Samuel M. Hamill.

The coördination idea began to have local expression during the same period. In Boston during 1912-15 the Maverick Dispensary developed gradually into a coördinating center for a number of health activities in East Boston, without, however, any coherent central organization. Toward the close of this period the health department of the same city initiated the "Blossom Street Health Unit" by providing common headquarters for a number of health agencies of the West End district. In 1914 Buffalo began the most extensive development in this country of a hospital and health center program for a large community.

The year following, Dr. S. S. Goldwater, then health commissioner of New York City, initiated an important health center project serving a district of the lower East Side with all the facilities of the health department, through a localized administrative unit. The plan was extended experimentally by the organization of similar

*This article is based upon a chapter in a forthcoming monograph, "New Clinics for Old," a study of clinics unattached to hospitals in New York City, by Michael M. Davis, Ph.D., and Anna Mann Richardson, M.D. Part of the material in it was taken by permission from a book by the first-named author, "Clinics, Hospitals and Health Centers," published by Harper & Bros., to whose courtesy the privilege of utilizing it here is due. Copies of this monograph may be obtained from the Associated Out-Patient Clinics Committee, 244 Madison Avenue, New York.

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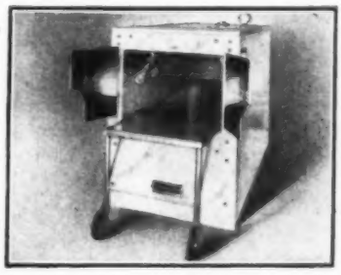

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health districts in the Borough of Queens, but political conditions prevented the continuance of this project.

In this field, as in others, enterprise was held back during most of the War years, but near their close great impetus was given to certain forms of health work. The American Red Cross advertised the health center idea and especially the dissemination of health information throughout the country. The term "health center" was thus popularized, but there was considerable opposition to the movement from the medical profession—usually because its nature was not properly understood, and because few medical men were consulted or instrumental in the formative stages of the enterprises. Their rôle was to serve where medical training was essential under the general administrative guidance of socially trained personnel. It has been estimated that several hundred "health centers" were established. They varied in scope from extensive enterprises to mere offices giving general health information.

Health Service Demonstrations

During the post-war period, the chief development has been the so-called "demonstrations," intending to work out methods of applying certain programs to a community or district. These projects have generally been financed by foundations, or by some single especially interested group, rather than by the general public. Notable among them have been the Framingham Tuberculosis and Health Demonstration, supported by the Metropolitan Life Insurance Company; the series by the American Child Health Association in cities of moderate size; the demonstrations of the Milbank Memorial Fund in Cattaraugus County, in Syracuse, and in the Bellevue-Yorkville District, New York, and the East Harlem Nursing and Health Demonstration, also in New York, operated in conjunction with the East Harlem Health Center described later.

All such demonstrations have involved the establishment of clinics and the formulation of a health center idea to a greater or less degree.

A review of the activities conducted in organizations known as health centers in New York and elsewhere in the United States and Canada, and of the forms of their organization, shows plainly that a health center cannot be defined in terms of any specific list of activities or by the form of its organization or by its physical plant. We find health centers, as in Cleveland, Buffalo, or New Haven, Conn., offering new forms of health service, chiefly or wholly preventive in nature. On the other hand, we find in Des Moines, Iowa, Halifax, N. S., Alameda County, Calif., and New York, health centers that offer a wide variety of preventive and curative services.

On the basis of observation and experience, labels such as "preventive," "curative," "health," "medical," and the like should not be applied to services as arguments either for or against their inclusion within the program of a health center. The sound basic considerations are the needs of a district and the availability of various services rendered by other already existing agencies and by private medical practice. It is likewise impossible to specify a particular form of organization for a health center—administrative or federative.

A review of the situation shows again that organization must conform to local conditions, and cannot be prescribed *a priori*. The extent to which a federate form of organization, pooling the interests of a number of existing agencies for the common service of an agreed area, and the degree to which welfare agencies not in the health field shall participate in the organization and activities of the health center, are examples of questions of this type, which for the present at least should be worked out on a pragmatic basis.

A definition of a health center might, however, be stated in terms of the two factors which all health centers that have been studied appear to present: first, the selection of a definite population or district unit, with the aim of serving all therein who need the services offered; second, coordination of services within this area, embracing both the facilities furnished by the health center itself and those provided by other agencies. The definition might be stated as follows:

A health center is an organization which provides, promotes, and coordinates needed medical service and related social service for a specified district.

In New York there are a number of illustrations of the health center in its various forms. The Bowling Green Neighborhood Association, established since 1914 on the lower West Side, and recently installed in its new building, exemplifies as to form of organization the health center managed under one administrative control, and as to range of work, both curative and preventive service combined with various social and recreational activities.

The Mulberry Community House, or Mulberry Health Center, of the Association for Improving the Condition of the Poor, has exemplified the service and demonstration aspects of the health center without, for obvious reasons, illustrating to any great extent the coordinating factor. It has demonstrated various methods of meeting district needs, of stimulating and improving existing agencies, and of checking up progress and results. The Red Hook Center of the Brooklyn Bureau of Charities has illustrated a small unit providing a limited range of service (for tuberculosis and for children).

Threefold Aims of Center

The Judson Health Center was initiated in 1920 by a church. It is an independently administered unit with its own board of directors. It undertakes to serve a definite area, with a population of over 40,000 persons, predominantly Italian. The stated aim of this center is threefold:

1. The encouragement of the people of the district to undergo thorough physical examination at stated periods.
2. Through the use of curative measures to correct such physical defects as the examinations disclose, and to make such curative measures the media through which preventive health lessons may be taught.
3. The education of the people of the district in proper habits of diet, exercise, rest, cleanliness and general hygiene.

The coordinative aim of the health center naturally takes form when a number of different agencies serving the district are brought into some federate type of organization. This is illustrated in an interesting way in New York City by the Clinton Neighborhood Conference, organized in 1922 by a group of agencies on the middle West Side of Manhattan. It is essentially a federation of 46 existing agencies for the purpose of joint planning to study or to meet the needs of the district, and to cooperate when possible in securing or providing service to meet unmet needs. The participating agencies include hospitals, public schools, public libraries, health centers, social centers and representatives of the charitable organizations, the churches, the Young Men's and Young Women's Christian Associations, and the Society of St. Vincent de Paul.

Several of these agencies are providing certain health services through clinics, visiting nurses, and social workers. The Neighborhood Association has assisted in interrelating these services more effectively. In the Greenwich, Chelsea, and Lower East Side districts of Manhattan

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there exist local councils of social agencies which have much the same purposes in view. The Clinton Association has gone further than the others in one respect, namely, that the association itself has provided, for the benefit of its members and the district, a dental clinic, because of the urgent need for this felt by all members.

The Clinton Neighborhood Association might thus be described as a federate health-center organization without the physical expression of a health center in a building. The widely known East Harlem Health Center is an example of the federate type of organization which also possesses a building.

In accordance with the announced program of the American Red Cross, a special health service committee of the New York County chapter initiated a plan for the East Harlem Health Center near the close of 1919. This was to be of the federate type, serving approximately 112,000 persons in the upper East Side of Manhattan. It was organized in January, 1921, and opened for active service in September of that year.

Council of Representatives

There is a council of representatives from the twenty-three agencies who provide services in the health center, with an executive committee of eleven members, to which the executive officer is responsible. The council and its executive committee directly control the operation of the building itself, owned by the American Red Cross, and a few central services, but have no administrative authority over the work of the constituent agencies. The total budget for the work of the health center organization alone for the year beginning September 1, 1924, was less than $21,000, but about $300,000 was expended by the twenty-two constituent agencies. During the three-year period the amount expended by all the agencies in the district increased from $1.70 to $2.79 per capita for the 112,000 population. It is estimated that the actual services were more than double. It is notable that the city health department took an important part in the cooperative activities as well as in providing services.

From the point of view of this article, a health center obviously represents a combination of a number of unattached clinics with one another, and with other public health and social services of or for the district. When clinics are located in the same building, they are of mutual assistance. A combination under one roof, for example, of baby welfare and prenatal clinics, with perhaps also some services to preschool or school children, enables the medical and non-medical personnel of the clinic to cooperate with one another to mutual advantage, and also saves time of patients and increases the weight and influence of the clinics in the district.

Coördination With Clinics

If there are also in the same building, for instance, a tuberculosis, a cardiac, and a dental clinic, still larger opportunities are opened up for the mutual interplay between the clinics in their medical aspects and the mutual stimulation of their working personnel. Various coördinations in the medical and social case work with patients come about naturally through the personal contacts among the specialized personnel of different clinics, even when these clinics are under separate organizations. The opportunity to provide needed supervision on the professional side is much greater than if the clinics are in isolated units in independent buildings and under independent jurisdiction. In Halifax, the main health center is physically associated with the out-patient department of a hospital and with an important medical teaching center, so that the whole range of institutional medical practice is provided. But in a city already as well provided with hospitals and out-patient departments as most sections of New York (the Borough of Queens and parts of the Bronx might be mentioned as examples of areas not thus served), the health center should ordinarily not need, and the New York health centers have not ordinarily provided, therapeutic services beyond those which seem urgently called for by neighborhood needs.

Grouping of Clinics into Centers

The problems of standardization, supervision, and personnel brought about among the unattached clinics by their rapid growth under a great variety of independent and mostly small local organizations, would thus seem to be largely solvable through the grouping of such clinics into district health centers. Merely grouping them in this way would not, of itself, solve the problems, but would tend to make their solution much easier. Complete solution, however, is not quite so simple, since the clientele of local organizations such as settlements, special schools, churches and charitable societies have certain needs for health service which may have to be dealt with by, and often within, these organizations themselves.

From a broader point of view, the health center idea in its aspect of coördination represents the means through which may be solved the problem of planning for adequate and economical health service on a district basis. The growth of unattached clinics and their related nursing and social services under the auspices of numerous local organizations represents the effort to meet this need on an uncoördinated basis. The health center idea has, in some other cities, been developed in this direction as a broad community scheme. Buffalo, Halifax, Alameda County, Calif., and Boston stand out as examples of this.

Still in Experimental Stage

Health centers are still in the experimental stage, and numerous problems in policy, organization, and internal technique need continued study and experiment. The time has not come for dogmatic statements.

How far, for example, is organization of the people of a district a practicable means of promoting the services at the center, and of advancing health education throughout the district? Experience shows great value in a loose local organization of agencies interested in medical or health work, in education, especially public and parochial schools, neighborhood and recreational bodies. On the other hand, the attempt to organize the people of a district themselves into a local council, with or without block workers, has generally yielded little result in proportion to the effort expended. The reasons for this difficulty lie deep in the characteristics of American neighborhood life, whether among native or foreign-born. Health work is also a highly technical service still in the experimental stage and cannot be carried forward by individuals without specialized knowledge and training.

The primary question with the federate type of organization is how far the federate scope and authority should go, as distinguished from the administrative authority of the constituent agencies. As yet this question cannot be answered on the basis of experience. The answer is clearer with respect to program making than with respect to administration. There can be no difference of opinion as to the desirability of a unified program of work for the district. Undoubtedly it is desirable to set up machinery and procedures whereby no one agency will develop its policy and activities without reference to a district program constructed by all interested groups.

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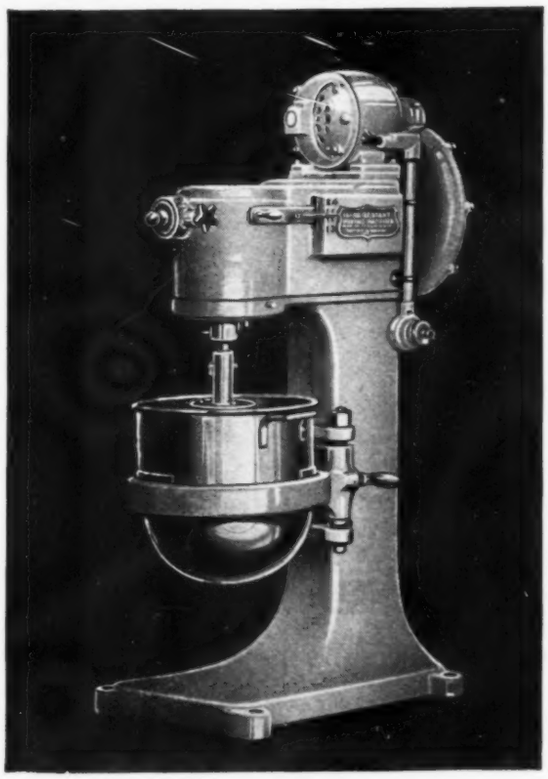

GIANT MIXERS
Now made to suit any size hospital

With the Giant you can mix anything from a few egg whites, which call for mixing at high speed, to a bowl full of heavy dough demanding steady mixing at low speed. The Giant will whip potatoes a fine fluffy white, make purees, apple sauce, slice any thickness of fruit or vegetable, crumb bread, rub up cheese, grind meat, grind coffee and spices, and grinder is adjustable to any degree, fine or coarse, while running. Mix cake or bread doughs. The Giant, made in several sizes, is the one money saving kitchen machine for use in hospitals.

Write for price and literature giving complete details.

THE CENTURY MACHINE CO.

4426 Marburg Ave., Oakley, Cincinnati, Ohio

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by C. W. MUNGER, M.D., Director,
Grasslands Hospital, Valhalla, N. Y.

HOW MUCH SHOULD BE CHARGED OFF FOR DEPRECIATION?

IN RECENT conversation with a man who for years had been a member of the board of directors of a large general hospital, the question was asked, "What is the actual value of the hospital's property?" He replied: "An appraiser, I suppose, would say that the property was worth a certain amount, but I have always considered physical property to be worth only as much as it brings under forced sale." Such consideration on the part of any director might indicate conservativeness but it does not provide a safe guide for management or supervision.

Every institution should be able to show, on its annual balance sheet, the estimated worth of all physical property. This figure is obtainable only after careful inventory and accurate calculation of all depreciation factors. The latter calculation, however, is frequently a problem of major proportions, since many hospital superintendents do not know how long given equipment can or should be expected to last. Because the several factors that both cause and arrest depreciation are constantly at work it is obviously impossible to fix for any particular type of equipment a definite, inflexible depreciation rate that would apply in all cases. Nor is it practicable to fix a single rate to apply to the institution as a whole. Wide variation in the factors affecting hospital equipment make such attempts unwise.

Broadly speaking, there are five chief factors that cause depreciation: Wear and tear from actual usage to which equipment is subjected; location, climatic conditions, or other elements of environment; deterioration through age, neglect or abuse; obsolescence; damage through accident, or other unforeseen conditions.

The several factors that arrest depreciation are chiefly: care and attention provided building or equipment; maintenance and repairs; alterations or change to prevent obsolescence.

Individual Rates of Depreciation

To the end that a basis for calculation may be set up, a table is appended giving individual rates of depreciation of all major power plant equipment, these rates having been arrived at through the experience of several manufacturers of each class of equipment. It may be noticed that many of the items have rates that vary within wide limits. This variation measures the influence of the eight factors mentioned above. In power plants where the arresting factors dominate the causing factors the lower rate applies, while the higher rates govern in cases where equipment operates under unfavorable conditions. To determine accurately depreciation on a given plant it is necessary for the superintendent to take into full consideration the effect of the above factors.

Depreciation Rates and Length of Life for Mechanical Items Commonly Found in Hospital Power Plants

Equipment	Depreciation Per Cent	Life Years
Alternators	4 -5	20 -25
Belting	4 -12	8 -25
Blowers	5 -6½	15 -20
Boilers, general	2½-10	10 -40
Boilers, firetube	7½	13
Boilers, watertube	5	20
Breechings and connections	3 -10	10 -33
Buildings, brick	2 -7	14 -50
Buildings, concrete	1½ -4	25 -70
Buildings, fireproof modern	2 -4	25 -50
Buildings, frame	3 -6	17 -33
Chimneys, brick	3 -7	14 -33
Chimneys, steel	4 -10	10 -25
Chutes—loading and unloading	10 -25	4 -10
Compressors, air	6 - 7½	13 -17
Condensers	3½-10	10 -30
Conveyors, coal and ash	5 -10	10 -20
Engines, gas	5 -10	10 -20
Engines, oil	3½ -4	24 -30
Engines, steam	4 -10	10 -25
Fans, ventilating	7½	17
Feed-water heaters	3½ -6	16 -30
Fire extinguishers	10	10
Fuel oil equipment	4	25
Gages, engine room equipment	10	10
Generators	3 -10	10 -33
Heating and ventilating systems	4 -6	17 -25
Hoists	7½-12½	8 -17
Hose, fire	20	5
Hydrants	2 -3	33 -50
Lockers, steel	5	20
Meters, electric	5 - 8	12½-20
Meters, gas	4	25
Meters, natural gas	20	5
Meters, oil	7½	17
Meters, steam flow	10	10
Meters, water	5	20
Motors, electric	4 -12½	8 -25
Piping, general	4 -10	10 -25
Plumbing	3½ 4	25 -30
Pumps	5 -8½	12 -20
Sprinkler systems	3 -7½	17
Stacks, brick and steel (see chimneys)		
Stand pipes	1 -2	50 -100
Steam traps	7½	17
Stokers, fixed parts	5	20
Stokers, working parts	25	4
Superheaters	3½	33

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REG. IN U.S.PAT.OFF.
SHEETS
AND
PILLOW CASES

for washability

BACK FROM THE LAUNDRY THEY come — time after time — beautifully clean, beautifully white, the fabric firm and intact. That is Pequot *washability!*

Pequots are especially *planned* for easy, effective laundering. They are woven neither too tight nor too loose. This weave allows the water to pass easily through the fabric, washing it thoroughly without straining the cloth.

The scientific weaving which makes a Pequot sheet supremely *washable* is only a part of the Pequot tradition of making sheets that wear long and stay beautiful. From raw cotton to finished sheet, every process leads to great strength, soft, smooth texture, brilliant whiteness, long life.

The more exacting you are about sheets, the more surely you will *standardize* on Pequot.

Made by the Naumkeag Steam Cotton Company, Salem, Mass., Parker, Wilder & Co., New York and Boston, Selling Agents.

Transformers	4½	-6½	15	-22
Turbines, steam	2½	-6½	15	-40
Turbines, water	2	-3½	33	-50
Valves, general	4	-6	17	-25
Water purifying plants	5½		18	
Wiring, electric	7½		17	

AN AUTOMATIC FOOD CUTTER

A machine that cuts, slices and cubes articles of food has been placed on the market. The machine is designed to facilitate the preparation of various vegetables, meats, fruit, kraut and salad ingredients and is particularly useful in the preparation of potatoes. It cuts the potatoes French fry-Julienne style and produces slices from one-sixteenth to one-half inch and cubes the strips by recutting them. The capacity of the hopper is nearly one-half peck of potatoes.

After filling the hopper the dial is set for the desired cut and the machine is operated by turning the handle. As the machine is automatically fed, large quantites are cut at a time, its production being one hundred times that of handwork.

The machine is made of solid brass, steel and German silver and is tinned so that it will withstand vegetable acids, will not rust or stain and is easily cleaned.

SPECIAL GAS CENTER RANGE

The gas range for institutional use, shown here, has eight ovens, four on each side, each twenty-four inches long by twenty-seven inches deep by fourteen inches high. They are of the ventilating type with two-piece removable bottoms of No. 10 gauge steel plate stretched over three-eighths thick corrugated cast iron.

The doors are made of malleable iron of triple wall construction, insulated with one-fourth inch thick asbestos board. The hinges, handles and latches are also of malleable iron.

Each oven has two drilled cast iron burners, constructed so as to prevent warping and are removable from the front of the range without the use of tools and without removing the oven bottom.

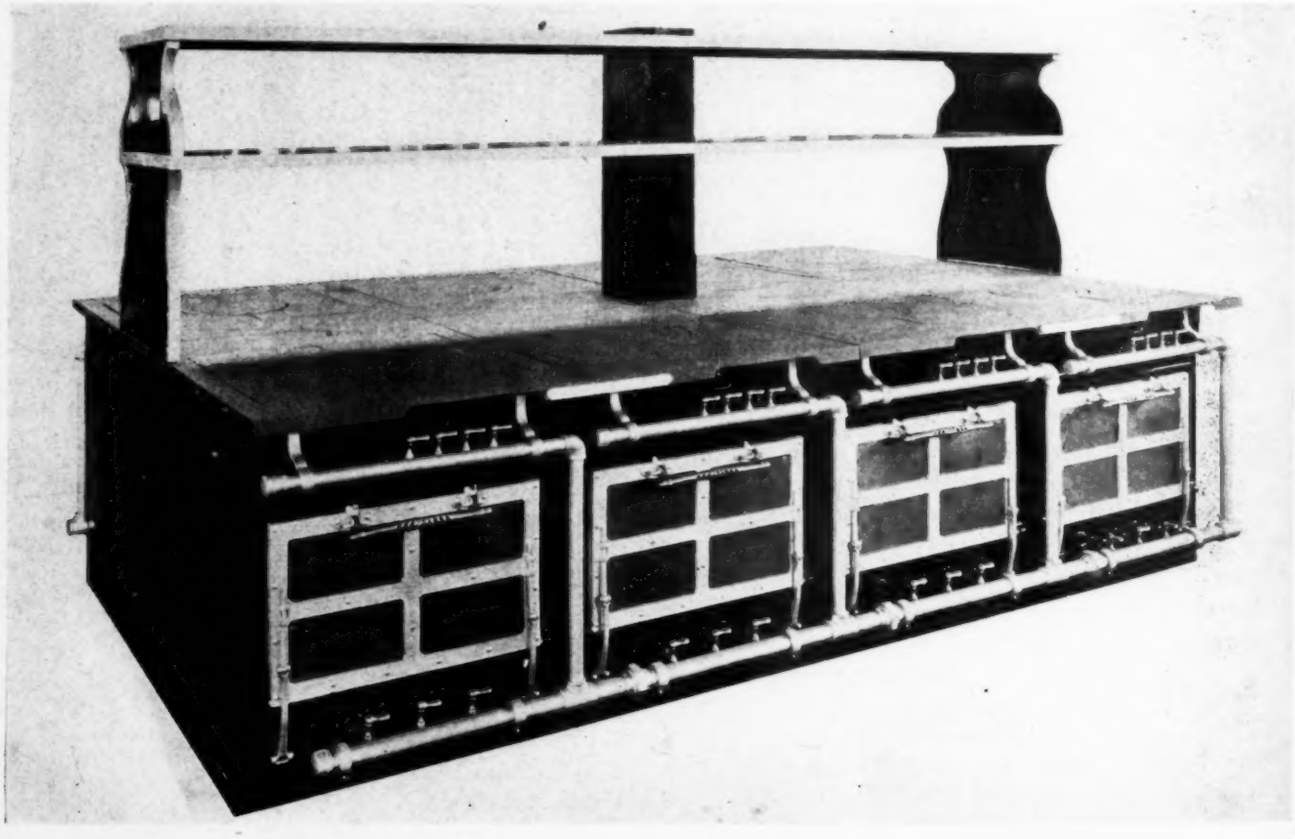
The tops are of cast iron in two sections and have a fourteen inch opening with reducing rings and lid. The burners are fifteen inches in diameter and are made in one piece with four rings, each ring having a separate valve and air shutter. The burners are centrally located and are supported on a cast iron drip pan surrounded with a fire brick three inches thick.

The gas valves are of the heavy lever handle type with orifices adjustable to any gas pressure.

The stove is furnished with either a single or double plate shelf and may have any number of units placed either in a line or back to back as is shown in the model. The vent can be taken through the shelf, as shown, or out of a secret flue at the back or either end. The model shown is ten feet long, six feet six inches deep and thirty-three and one-half inches high.

MOP TRUCK FOR FLOOR SCRUBBING

A mop truck to facilitate scrubbing in hospitals and other institutions has recently been put on the market. The truck, illustrated here, has a sixty gallon capacity consisting of a thirty-gallon clean water tank and one of similar size for used water. It weighs ninety-two pounds and the steel body is finished with a special electro-plating process that is rust-resisting. The corners are rounded to protect walls, doors and furnishings and the wheels are rubber tired, eight-inch double disc ball bearing, the hub caps and wheel flange being inside the rubber tire.



Hotels

VANDERBILT.....New York
PALMER HOUSE.....Chicago
MIAMI-BILTMORE .....Miami
DAVENPORT .....Spokane
BOOK-CADILLAC .....Detroit
DEL MONTE.....California
WASHINGTON .....Washington
WINDSOR .....Montreal
SCHENLEY .....Pittsburgh

Restaurants

HUYLER'S.....New York
MAILLARD'S .....Chicago
BLUE RIBBON.....Miami
BROWN'S.....Portland, Ore.
ST. JOHN'S ARBOR.....Detroit
KINNEY'S.....Los Angeles
GOLDEN BEAR....Amarillo, Tex.
EDELWEISS .....Denver
B/G SANDWICH SHOPS.....
New York, Chicago, etc.

Hospitals

MIDWAY.....St. Paul
GOOD SAMARITAN....Los Angeles
MUSKOKA....Gravenhurst, Can.
ST. LUKE'S.....Chicago
ST. ELIZABETH'S....Utica, N. Y.
FORD .....Detroit
WESLEY MEMORIAL.....Atlanta
JEFFERSON .....Philadelphia
GOOD SAMARITAN, ...
W. Palm Beach

Cafeterias

BUNN BROTHERS.....New York
CLINTON.....San Francisco
UEATA .....Detroit
HUDSON'S BAY CO....Winnipeg
MORRISON'S.....New Orleans
NIXON'S .....Pittsburgh
PANGBORN'S.....Fort Worth
NATIONAL BISCUIT,
New York, etc.
BRITLING'S,
Atlanta and Binghamton

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NORTHWESTERN UNIVERSITY,
Chicago
ROOSEVELT HIGH SCHOOL,
Ypsilanti, Mich.
CHURCH OF THE ADVENT,
Cincinnati
PUBLIC SCHOOLS..Oakland, Cal.
MILITARY ACADEMY,
Peekskill, N. Y.
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CENTRAL HIGH.....Los Angeles
FULTON CO. HIGH.....Atlanta

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WE never think of them as in the same class. But whether it be a Hotel, Restaurant, Hospital, Cafeteria or School, there is one department in each where the same problems clamor for solution.

And whether it is a question of labor costs or broken dishes—of speed, cleanliness or contented help—these problems are found in all dishwashing departments.

The Crescent users here listed and more than 21,000 others, agree that the Crescent is the answer to the dishwashing problem.

With the Crescent the dishes are handled only twice. They are washed with a torrent of revolving water—an exclusive Crescent feature—which is faster and better than any other method. The final rinse with fresh hot water, drying the dishes without toweling, insures cleanliness and sterilization.

Tell us how many you serve and we will tell you the size Crescent you should have

Address Dept. J-400

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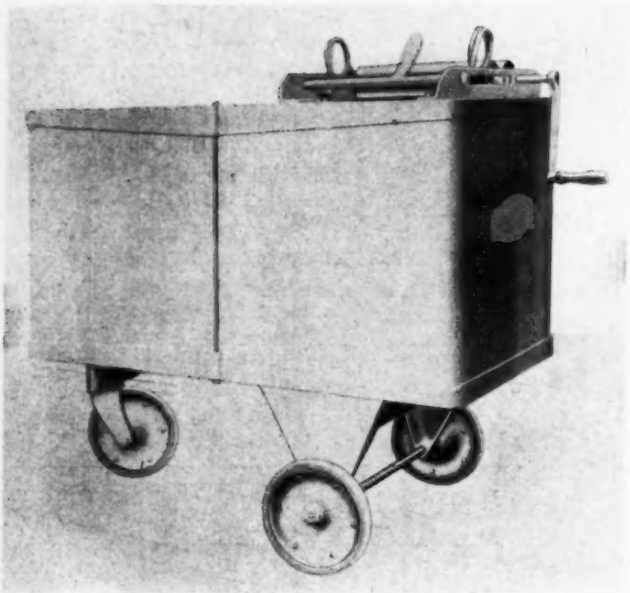
of
The Hobart Manufacturing Co.
New Rochelle... N. Y.

CRESCENT
Automatic
Dishwashers



The wringer, which is mounted over the used water tank, consists of three-inch corrugated rollers, with no sharp corners to wear or injure the mop. The mop shield immediately beneath the wringer rollers keeps the mops out of the dirty water.

The truck is so constructed that it is easily pushed from room to room and not difficult to operate in congested places.

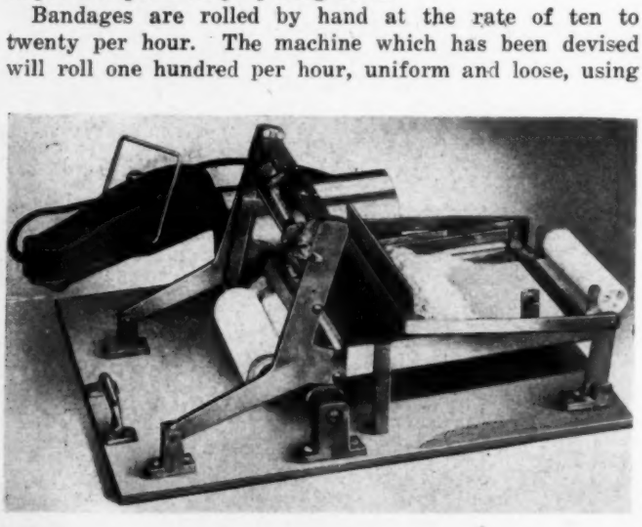
PLASTER OF PARIS BANDAGE ROLLER

Edgar D. Oppenheimer, M.D.
New York

Plaster of Paris bandages are prepared by spreading a thin layer of gypsum on a crinoline bandage and rolling up the bandage loosely. If the bandages are rolled tightly the gypsum, on immersion in water, will not become completely wet throughout, the water pentrating only a small distance and so slowly that the plaster will set before complete wetting takes place. Such bandages will necessitate a constant addition of water to the splint during its application, and water will be added in excess to the half-set gypsum, resulting in a weak material.

In preparing bandages it is necessary that spaces exist between the layers through which water may penetrate. This is accomplished by loose winding, which is the most important point in preparing rolls.

Bandages are rolled by hand at the rate of ten to twenty per hour. The machine which has been devised will roll one hundred per hour, uniform and loose, using



crinoline in any shape. The machine is adjustable for width, length, amount of plaster and looseness of wind. It is fifteen by sixteen inches and is operated by an electric drive with foot control.

It is the method of obtaining a loose wind that makes this machine practical. This is done by the following mechanism. A pair of rollers, the lower one rubber covered and motor driven, grip and pull the crinoline through the plaster spreader and feed it further on a second idle roller. This second roller is hung on a pivoting frame and is in loose contact with the rubber roller, just behind the first idle roller. The crinoline is started by hand around this second roller. The friction of the rubber roller acts to push the laden crinoline around the second roller with some slippage, which is due to the slight contact and also to the separation between the layers by the plaster granules.

The tendency is to push the part immediately after the contact point away from the wind, not back on it. Firmer contact, of course, gives a snugger wind. The crinoline receives the impulse and transmits it to the roller, so that it is actuated ahead of the roller and whatever slippage occurs remains throughout the wind. In this way small spaces between the layers remain, thereby giving the water access to the layers and making thorough wetting possible. The tendency to slippage is more mani-

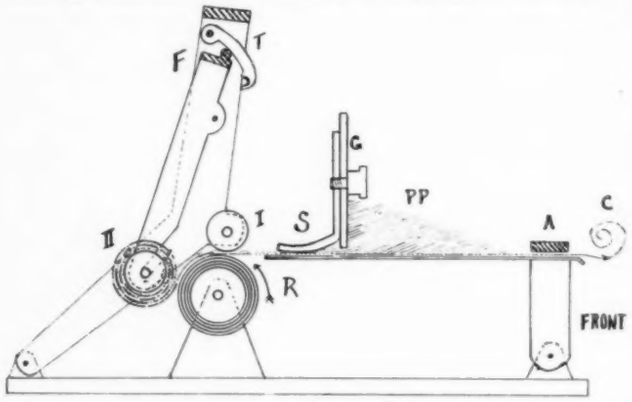


Diagram of bandage roller. R—rubber roller motor driven; I—first idle roller; II—second idle roller upon which the finished bandage is wound; F—rear frame; T—trigger; S—spreader; G—gate; PP—plaster of Paris on hopper; A—front guide; C—crinoline.

fest in the first than in the latter layers, so that greater pressure must be exerted on the rollers at the beginning of a bandage. This is accomplished by a trigger above, by which the leverage is less as the roller advances. A spring on a ratchet can be set to the desired amount to control this trigger.

The apparatus consists of a tray or a platform on which the crinoline rests and upon which the gypsum is put with a scoop. Adjustable side guides and a cross bar to keep the bandage straight and taut are in front. A sledge and spreader with adjustable gate, which regulates the amount of plaster, are in the back of the hopper. As the crinoline is pulled through the gate, it allows a given amount of plaster to adhere, and the spreader smoothes it in evenly. At the end of each bandage, by lifting the spreader upward, the guide is lifted also and the hopper tilted forward, spilling the remaining plaster into the tray in front. This is done for each separate bandage. The one movement, which cleans the hopper, leaves the space open for threading in the next bandage, which can then be dropped in through the opening with the other hand. By lowering the sledge, the hopper and also the guide are replaced.

The plaster is then dumped on the hopper for the next

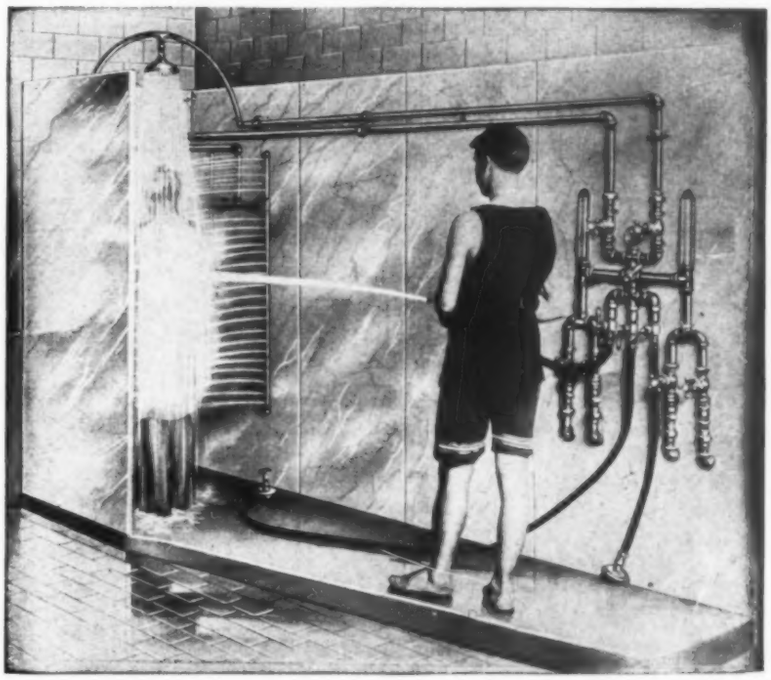
EFFICIENCY *and* ECONOMY

WITH BATTLE CREEK HYDROTHERAPY EQUIPMENT

"There is no remedial agent so flexible or so perfectly adapted to the treatment of disease as is water"

No hospital superintendent or physician is a stranger to the vast good embodied in Hydrotherapy. It ranks with "Light" as a pioneer in Medicine. It is one of the original 'specifics' and has stood the test of time.

The Battle Creek Hydrotherapy Apparatus still retains the position it created years ago. It is the oldest, simplest, most efficient, and most accessible type available. With this apparatus there are no expensive installations, no unhandy and inaccessible valves, and no buried piping necessitating the tearing up of a wall or floor to repair.



The G-3 Hydrotherapy Apparatus is complete, fitted to give the overhead and needle showers, rain, perineal, jet, revulsive, Scotch, and any other form of douche. All metal parts are made of heavy brass Nickel-plated. The pipes are made of the finest brass and are the one inch iron pipe size. The temperature regulating valves and the needle and overhead shower control valves are the standard compression type. The quick-change valve, located in the center of the control section, is made of babbit metal and will wear indefinitely. The hose used with the nozzel, perineal and rain douche is the best rubber procurable.

OTHER RECOGNIZED BATTLE CREEK APPLIANCES

Electric Light Bath Cabinets
Three models, varying in size and cost. Each cabinet complete with special comfort chair and necessary bulbs. Made of the finest hard wood water-proof cemented veneer. All models shipped ready to install.

Oscillo-Manipulator
An ingenious apparatus which gives massage better than the hand and with which every part of the body may be treated. Built to stand the strain of hard, daily institutional service. No attendant needed.

Vibratory Chair
A thoroughly practical means of applying vibration to all parts of the body. Highly beneficial in chronic cases where physical exercise is denied. A popular health aid for institutions and physician's offices.

The Radiantor
A portable electric light bath in compact form. May be applied while patient is in reclining or sitting position. Especially adapted to the needs of ward hospitals and small institutions where conservation of space is a factor.

Sinusoidal and Galvanic Apparatus
A complete and efficient appliance for producting positive muscular reactions. Frequency can be varied from 10 to 200 impulses per minute. Attractive in appearance; compact, and durable. Unexcelled in the quick relief of pain.

Solar Arc Lamp
Enables bed-ridden cases to benefit by the therapeutic value of sunlight at any time. The Solar Arc produces a larger proportion of actinic rays than is present in sunshine. No danger of tissue burns as in the use of X-ray and similar lights.

Electric Thermophore
The most efficient means devised for local or general applications of heat. Manufactured in pad and blanket forms. Special features make the Battle Creek Thermaphore superior to all others.

The Photophore
A small two-light reflector-type lamp for the convenient application of radiant light. Temperature controlled by thermostat. Indispensable in the care of the sick.

Dumbell Vibrator
A powerful vibrator that is built to stand hard service. Enables the operator to apply deep vibrations to any part of the body in three different forms—percutient, lateral or centrifugal.

Send now for catalogue of Bulletins

PHYSICAL THERAPY EQUIPMENT CO.

Sales Agents for SANITARIUM AND HOSPITAL EQUIPMENT COMPANY

Box M. H. **Battle Creek, Michigan**

"The Home of Physical Therapy"

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Necessary *for the* Modern Hospital

Philadelphia Mental Hospital Buildings, Byberry, Pa. Equipped with over 27,000 feet of Chamberlin Weather Strips. Architect, Phillip H. Johnson. Contractor, F. W. Mark & Co. Weather stripped windows should be practically airtight yet easy to operate. Chamberlin covers entirely the runways of sliding windows but raised track-like corrugations reduce sliding friction to a minimum. See illustration at left.

Chamberlin Weather Strips

To meet the needs of the modern hospital, weather stripping must be fully efficient and must retain this efficiency permanently. 34 years of performance have demonstrated how satisfactorily Chamberlin equipment meets these dual requirements. Inspections of installations installed as far back as 1893 show that Chamberlin Weather Strips are giving as good service as when first installed—that there is no wear either on strip or sash. Chamberlin equipment permanently bars draughts, dust, rain and snow—deadens street and corridor noises and serves as a permanent aid to even, uniform heating. Chamberlin Weather Strips retain their efficiency because the Chamberlin design is correct and because they are installed exclusively by Chamberlin mechanics, trained and supervised to work to the rigid Chamberlin standard. To safeguard its customers to the utmost, Chamberlin guarantees and services its equipment "for the life of the building". Small wonder that Chamberlin is the outstanding choice for modern hospital construction.

Write for Chamberlin Literature

CHAMBERLIN WEATHER STRIPS
"SINCE 1893-THE STANDARD"

CHAMBERLIN METAL WEATHER STRIP COMPANY
West Lafayette Blvd., Detroit, Michigan

Over 100 Sales and Service Branches throughout the United States

FC—168

bandage. As the crinoline is pulled back on the spreader it passes over the rubber roller. The first three or four inches may have no plaster on them. The rear frame is lifted up and replaced again, so that the crinoline passes between the first two rollers. The weight of the upper roller provides the friction, and the second idle roller is carried in two slots in the smaller frame pivoted from the rear frame. When pulled back, it catches in place about three inches clear of the rubber roller.

The crinoline is then passed under this roller and then put around it, tightly for the first turn or so, allowing the rollers to approximate each other. The spring and trigger above hold these rollers in contact. It is important that the first turn be closely applied and that this roller turn freely. Stepping on the switch, the winder will run without any manual attention unless it is necessary to feed in the crinoline in front of the guides. At the beginning, enough gypsum should be put into the hopper for the entire bandage. When completed, simply pull the finished bandage backward and when the hanger is caught, lift the bandage out from the slots with the roller inside. Slide out and replace the roller, and repeat as above, for the next bandage. If the crinolin comes in a length in excess of that required for individual bandages simply raise the rear frame when enough has been rolled for a bandage and cut across with shears. It is not necessary to roll up the crinoline before using.

The following adjustments should be made: 1. To obtain the proper width of bandage, place side guide at desired space. Wind all bandages up the middle. 2. For amount of plaster, raise or lower gate on the spreader. The amount of plaster in the hopper does not affect deposit. 3. For tightness of roll, regulate spring on trigger with ratchet, which will control the contact of the last two rollers. Remember to wind loosely. The machine is independent of the amount of plaster used.

The roller has been used in several hospitals and found satisfactory, the operating room personnel being relieved of much drudgery and the physician getting a better and more uniform plaster bandage.

TREATMENT APPARATUS FOR CHRONIC CONSTIPATION

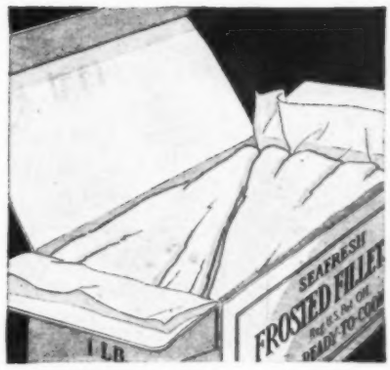
The device shown on page 160 is recommended to physicians by its manufacturers for use in the treatment of stubborn constipation and other conditions due to lower intestinal stasis or atony. As will be noted, the apparatus has a complicated appearance. The principle involved, however, as well as the manipulation, is comparatively simple.

This "intestinal bath" was devised at the suggestion of Dr. A. Brosch, of Vienna, Austria, who has used it extensively. It has also been installed in numerous clinics in Austria and Germany, and favorable reports as to its use have appeared in medical journals of those countries. One hospital in New York City is using the apparatus and attests to its value.

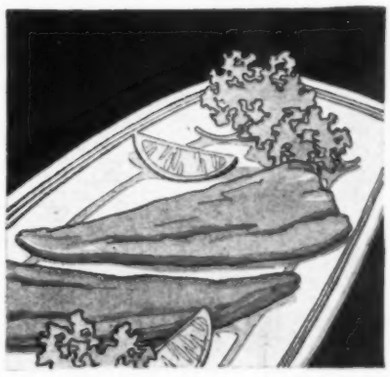
No detailed description can be given here, but the following are the principal features of the apparatus:

The saddle is equipped with a metal rectal tube mounted on a swivel joint. The rectal tube is inserted and the saddle strapped to the patient. Leakage of fluid about the saddle is prevented by means of a rubber pad that can be inflated. Plain water, soapy water, or water containing other medicament is placed in the tank and by an ingenious method of regulation, this fluid is delivered through the rectal tube at any desired pressure. The

FISH



WHAT WE MEAN BY *FROSTED!*



THE OLD method of air freezing fish for distant shipping was never satisfactory. The old process broke the cell structure of the fish and lost the full, rich flavor.

SEAFRESH Frosted Fillets and Frosted Sealoaf are prepared in a new way called "frosting"—a quick freezing at an extreme low temperature—so that when *Seafresh* is ready to cook, *all* the flesh cells are unbroken and the juicy texture and flavor are retained as in fresh fish.

YOU MAY buy *Seafresh* in two forms: Frosted Fillets of uniform size, in 1-lb. and 5-lb. cartons; and Frosted Sealoaf—which is pure fresh fish meat compacted into a "cake" or loaf of solid nutriment. All waste and bone have been removed—*Seafresh* is all ready to cook.

SEND NOW for samples to test, and recipes. Hospitals are already keenly interested users of *Seafresh*. Dietitians are feeding their patients better fish, and auditors are delighted with the saving.

SEAFRESH

GENERAL SEAFOODS
CORPORATION
GLOUCESTER, MASSACHUSETTS

GENERAL SEAFOODS CORPORATION
Gloucester, Mass.

Gentlemen: Please send me free samples of Frosted Fillets and Frosted Sealoaf.

Name.....

Address.....

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MH3

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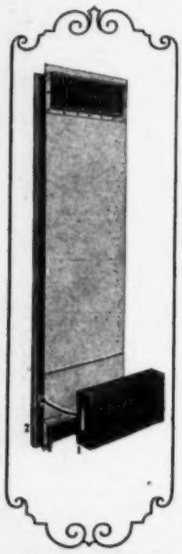
Children's Ward, Women's Hospital, Cleveland, Ohio

...and in the modern hospital



Radiator (1) comes installed in a steel case (2) more substantial than the wall itself. The complete unit is ready to install in any 4-inch wall or partition

All the benefits of radiator heat in every room, yet no radiator in any room. Welcome warmth without the unwelcome exposed radiator. Truly an ideal realized.

The Herman Nelson Invisible Radiator is especially designed to be placed in any standard wall or partition. Its sanitary and space saving advantages become immediately apparent.

The saving in space allows an extra bed in most wards. Free passage in narrow corridors and more practical furniture arrangement. The Herman Nelson Invisible Radiator is leak-proof, rust-proof and indestructible. Requiring no service or repairs—it is forever out of sight and out of mind. Mail the coupon for complete information.

THE HERMAN NELSON CORPORATION
MOLINE, ILLINOIS
Builders of Successful Heating and Ventilating Equipment for 20 Years

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FREE This interesting book of facts on The Herman Nelson Invisible Radiator.

THE HERMAN NELSON CORPORATION
Moline, Illinois

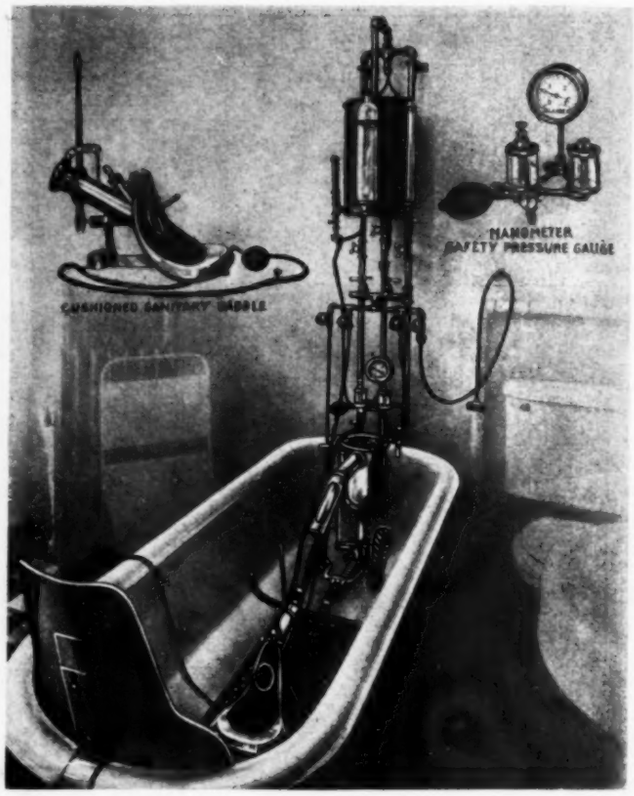
Please send me your illustrated book No. 40 I am planning to build a house containing..... rooms.

Name.....

Address.....

HERMAN NELSON
Invisible
RADIATOR
TRADE MARK

With the Wedge Core
INDESTRUCTIBLE
TRADE MARK



lower bowel becomes filled and distended with the solution. Some counter support for the internal distention is afforded by the water in the tub that covers the patient's abdomen. The patient automatically expels the solution about the tube. In case of the patient's inability to expel the solution, it is possible to remove it by a suction device which is a part of the apparatus. The solution with returned fecal matter passes through the large tube and into the receptacle at the base of the tub. This receptacle has a strainer for the purpose of retaining for examination any of the discharged contents of the bowel. If it is not necessary to examine a specimen, the bottom of the strainer is released and in this manner the intestinal contents are discharged direct into the sewer.

It would seem that this apparatus, if its cost can be kept down to a reasonable figure, would merit a careful test by the hospital field. Its use should, however, be under the careful supervision of a physician.

SUGGESTIONS FOR BOILER ROOM OPERATION

In the interests of operating efficiency it would be well for the superintendent to check up, at frequent intervals, to make sure that the engineer is:

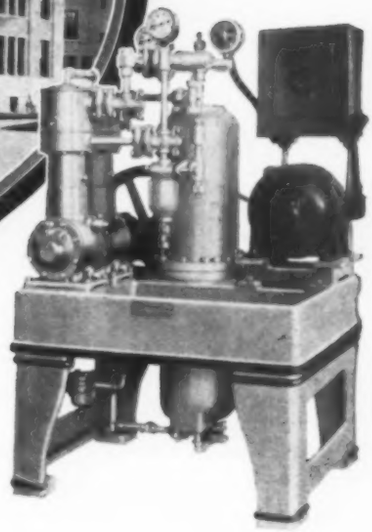
1. Keeping all heating surfaces clean, both inside and outside. That he is using a standard method of scale prevention and is cleaning the tubes frequently.
2. That stack temperatures and flue gas analyses are taken regularly as a part of the daily routine.
3. That all baffle and boiler settings are tight, and that the feed water temperature is maintained at a high level.
4. That he is burning coal not only suited to the grates but low in ash content and low in cost per B.T.U.
5. That the engineer thoroughly inspects the insulation on all exposed steam and hot water pipes.

To stop steam losses it is necessary that:

Lipman

AUTOMATIC REFRIGERATION

Masonic Memorial Hospital at Springfield, Ohio, where Lipman No. 200 is installed.



Now Standard Equipment

The plans of practically every modern hospital call for mechanical refrigeration. Because mechanical cooling is accepted everywhere for its superior efficiency. To attempt to refrigerate a modern hospital with ice is comparable to operating without anesthesia.

Lipman Full-Automatic Refrigeration is ideal for hospitals because one machine will cool the drinking water, the refrigerators, biological laboratory, and mortuary, and will make ice, in cubes or blocks as desired.
Write Now for full information.

Lipman Machines are exceptionally well-built and closely inspected. They are dependable, safe, quiet, sanitary and exceedingly economical. Service at all times is assured by a financially strong company. Service stations throughout the United States, Canada, and many foreign lands.

GENERAL REFRIGERATION COMPANY

117-193 **Shirland Ave., Beloit, Wisconsin, U.S.A.**

Please send me full particulars including Free Descriptive literature on Lipman Refrigerating Machines.

Name..... St.....
City..... State.....

THE DRY, CONSTANT COLD OF THE MOUNTAIN TOP

GR CO

For complete index of advertisements refer to the Classified Directory

Two Towels Dispensed Instead of One

Stop Towel Waste This Way

DUBLTOWLS reduce laundry bills and towel replacement charges. Strong and soft as cloth towels, yet far more economical. Smaller than ordinary paper towels, they cost less per sheet. Dispensed in pairs (a towel for each hand). One Dubltowl wipes dry—no second helping needed. This exclusive feature stops waste.

Dubltowls are made of unbleached all-kraft stock. Free from caustics and chemicals. Sanitary. Can be used as readily on the face as on the hands. No harshness. Remarkably absorbent. Lintless. Dispensed from neat cabinet illustrated above or your own standard size equipment. Size of Dubltowl 10¾x10 in., 150 Dubltowls (300 sheets) to package. Write for samples, prices and name of nearest distributor.

Request upon your letterhead will bring a Bay West Wash-Up Kit—a new combination of Dubltowls and soap sheets. Fits pocket of your automobile or instrument case.

Bay West Paper Company
Green Bay, Wisconsin

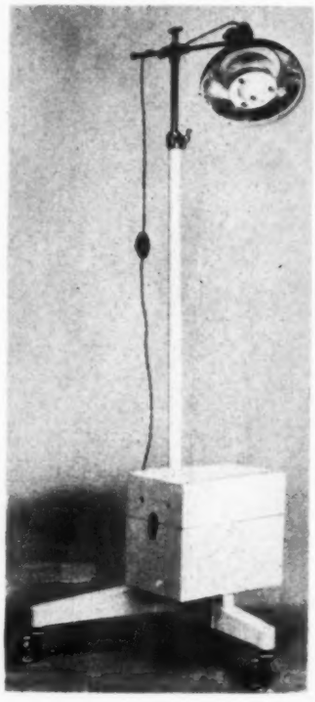
BAY WEST DUBLTOWLS

"ONE DUBLTOWL WIPES DRY-YOU TRY IT"

1. All exposed steam mains and pump cylinders are insulated; that all dead steam lines are cut off, and that all steam valves are tested frequently for leakage.
2. Frequent internal examinations of all steam using equipment are made, particular attention being given to pumps.
3. The cylinder oil used is giving the proper lubrication.
4. The amount of steam used in the generator is checked up periodically and analyzed against performance.
5. All steam traps are given inspections at intervals not longer than one week.

COMBINED OPERATING AND EMERGENCY LIGHT

An improved portable emergency unit has been designed for use in the operating room as well as on every floor of the hospital. The new unit contains a trickle charger together with the battery both contained in the one case on the fixture. This feature has eliminated the necessity for keeping the battery fully charged.



It is mounted on a portable telescopic floorstand and uses a 100 watt lamp. The charger provides three rates of recharging, in order to replace the current in conformity with the amount that is withdrawn when the light is burning. At the fastest rate, which is a half ampere per hour, the light may be used on an average of eighteen hours per week or seventy-five hours per month without requiring attention other than that of connecting the charger whenever the light is not being used. When the light is not in use the plug should be inserted in the socket to put the battery on charge. When illumination is desired the procedure should be the reverse. The new type of unit has been especially designed for all operations in which the illumination of restricted areas and deep cavities is required. The light reduces the annoyance from head shadows and produces no heat or glare to disturb the operator. The unit provides an everyday operating light and an emergency light that is ready for use at any time and is easily carried.

VACUUM BRUSH FOR CLEANING MATTRESSES

A vacuum brush has been designed for cleaning clothes, mattresses, upholstered furniture and stair carpets. The brush weighs about three pounds and is twelve inches long. It is motor-driven and has a straight brush attachment for work on flat surfaces that might be scratched by the metal attachment.

The motor is the 110 volt universal type and may be operated by alternating or direct current. The brush draws the dirt from the mattress or other material and carries it into the dust bag.

Photography in Hospitals Saves Time and Money

It is a fact that a complete application of photography to hospital and clinical cases will result in a significant saving in time of the staff and administrative moneys.

It is easy to understand why this is so. The photographic equipment is not expensive and with unambiguous photographic records the doctors' time is not needed in writing extensive case reports.

No hospital is complete which lacks adequate photographic equipment.

Eastman Kodak Company

Medical Division Rochester, N. Y.

THORNER'S
Silver Service

Thorner's Silver Service is made of 18% Nickel Silver with a quadruple silver plate. Wears a lifetime. Replacement through breakage is forever eliminated. It is never affected by wear or polishing.

Illustration features Thorner's Improved Three Compartment Hot Water Plate. Tea Set with reinforced bands, hard metal hinges, Silver Soldered and one-piece unleakable bottom. Covered Soup Cup with Silver Soldered handles. Sherbet Dish, Individual Bud Vase, Salt and Pepper Shakers, and Superior Grade Sectional Plate Flatware.

Visit our exhibit at the Catholic Hospital Association Convention. June 20 to 24, at Milwaukee, Wis., Booth 13.

THORNER BROTHERS

Importers and Manufacturers of Hospital and Surgical Supplies

386-390 Second Avenue

NEW YORK CITY

PROVIDING SATISFACTORY HOME-MADE BULLETIN BOARDS

Bulletin boards of some sort are a necessity in hospitals. Ordinary wooden ones are not always satisfactory, in that thumb tacks are difficult to attach and detach. A desirable bulletin board should have a soft material for backing so that notices may be easily taken up and down.

A good bulletin board, which can be made in any hospital carpenter shop, consists of a sturdy, oak frame surrounding a piece of "cork" linoleum. The linoleum is similar in construction to ordinary floor linoleum having a burlap back but does not have a smooth, glazed surface. The surface resembles that of sheet cork, but is, however, much less expensive and may be bought in large rolls so that bulletin boards of practically any size may be made

without piecing. The piece of cork linoleum is glued to thin wood with ordinary linoleum glue, and the frame is attached much in the same manner as a picture frame, without the glass, of course.

The bulletin boards may be set on wooden standards or may have metal eyelets attached, so that they can hang on the wall. In some instances, it is preferable to fasten them tight to the wall with screws.

The cork linoleum is not expensive and may be kept in stock, so that bulletin boards may be constructed whenever needed.

NON-DESTRUCTIVE ULTRAVIOLET LAMP

A new ultraviolet ray therapeutic lamp, which has eliminated the danger of erythema, serious burns, and other complications through the absence of the biologically destructive short wave ray, has been placed on the market for use in general irradiation of the whole body or of any desired region. Because of the construction of the lamp no water cooling is necessary nor are any filters used.

Because of the elimination of these destructive short wave rays, the lamp can be used for periods of irradiation lasting two hours, if necessary, without danger of burning or causing inflammatory complications. This applies not only to general irradiation of the outer body but to localized irradiation of the most sensitive mucosa of the body through any of its orifices. This is made possible by means of special adapters for the head specialist; for the dentist; a laryngeal type with mirror; and for treatment of the cervix.

For Gastric Ulcer

—*the first solid food given in its treatment*

In the famous Sippy diet treatment now generally used in hospitals for gastric ulcer, Cream of Wheat is the standard food given as the first solid.

It is particularly designated by specialists in this treatment for several important reasons.

1. Cream of Wheat is a bland food which takes care of the high acidity in such cases.

2. It is free from any of the outer parts of the wheat which may prove irritating to the intestinal tract.

3. It is very easy to digest. Its simple granular form is quickly handled.

4. Its high carbohydrate content is completely utilized.

5. You can always depend on the quality of Cream of Wheat, winter or summer. No other cereal is so safeguarded from outer contamination. In its triple-wrapped-and-sealed box, you get protection you cannot expect of food sold in bulk or inferior packages.

6. It is economical for hospital use. There are 40 generous feedings in one box, at less than 1c a feeding.

On general hospital menus, Cream of Wheat is an invaluable food. Every patient can eat it in some form. You can serve it in such a variety of delicious ways. Let us send you our book of 50 recipes. It is free.

FOR 30 YEARS A STANDARD FOOD ON PHYSICIANS' DIET LISTS

Cream of Wheat

Cream of Wheat Company, Minneapolis, Minnesota
In Canada, made by Cream of Wheat Company, Winnipeg

© 1927, C. of W. Co

CINCINNATI'S HOSPITALS

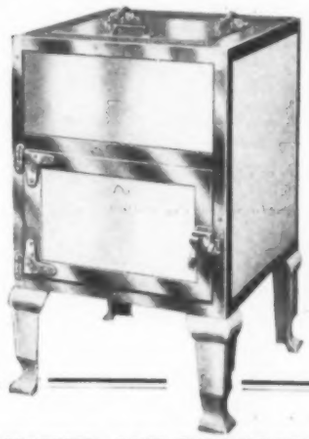
Prefer

THESCO REFRIGERATORS

Efficiency, sanitation and service in preserving food in its original freshness have made Thesco Refrigerators the choice of Cincinnati's ultra-modern Hospitals. Whether in the service kitchen, or diet kitchen, food is kept pure and wholesome. **Adaptable to either ice or mechanical refrigeration—efficient with any make of Electrical Refrigerating Unit.** Installations in Cincinnati Hospitals are:

GOOD SAMARITAN HOSPITAL
DEACONESS HOSPITAL
BETHESDA HOSPITAL
JEWISH HOSPITAL
GENERAL HOSPITAL
ST. MARY'S HOSPITAL
ST. FRANCIS HOSPITAL
TUBERCULOSIS HOSPITAL
LONGVIEW HOSPITAL

"Always high in Quality



And Low in Temperature"

The CRUSHED ICE REFRIGERATOR

Another Service by THESCO!

A necessity in every hospital where the ultimate in service is required. Take the ice service out of the Diet Kitchen and put it in the Utility Room, where it belongs. Sturdy cabinet . . . built for wear. Compartment below for Seltzer, Vichy, etc.

Thesco Engineers will help you solve your refrigeration problems. Over a half-century of experience, gained from nation-wide contracts, will benefit you. Write today for consultation. This service is gratis.

Catalog MH-84 is very valuable. Send for your copy now! Free to Hospitals and Architects.

THE C. SCHMIDT CO.

Established 1870 — THE HOME OF THESCO PRODUCTS — Incorporated 1907

John and Livingston Sts. CINCINNATI, OHIO

THE HANOVER GENERAL HOSPITAL, HANOVER, PA.
Constructed by The Ballinger Co., Phila.

A Personal Message:

(W. F. Dougherty, Jr., President, speaking)

"Every successful business owes its Prosperity to the Quality and Variety of Service. This Organization is no exception and so well have we looked after the interests of our customers that the name DOUGHERTY is known for Reliability from Maine to California and from Canada to Florida."

W. F. DOUGHERTY & SONS, INC.
1009 ARCH STREET, PHILADELPHIA, PA.
Branch: 914 Atlantic Ave., Atlantic City, N. J.

The structure pictured in this copy is Kitcheneered by Dougherty

Orange Juice

Cheaper—Quicker—Cleaner

YOU know the health value of orange juice. Its aid as a strength builder in convalescence. That patients enjoy this palatable golden tonic.

Now by this new method, it is simple to prepare — one person can extract the juice for hundreds . . . quickly and economically.

The (*electric*) Sunkist Extractor extracts from three oranges as much juice as you formerly got from four. Get EVERY drop of juice—do it in ¼ the time. Write today for full information. Cost price offer, and terms.

Sunkist Fruit Juice Extractor

California Fruit Growers Exchange
Div. E-74, 154 Whiting St.
Chicago, Ill.

Without obligation, please rush me information regarding the Sunkist Fruit Juice Extractor.

Name.....

Street.....

City.....State.....

DR. R. G. BRODRICK WILL GO TO STAMFORD UNIVERSITY HOSPITALS

Dr. R. G. Brodrick, a member of THE MODERN HOSPITAL editorial board and president of the American Hospital Association, who for a period of approximately nine years has been director of hospitals for the group of institutions controlled by the Alameda County Board of Supervisors, Alameda County, California, has been offered and has accepted the position of director of hospitals at Stanford University Hospitals, Stanford University, California, and has tendered his resignation to take effect April 1. The Highland Hospital, Oakland, which has been constructed under Dr. Brodrick's immediate supervision, has now been completed, equipped and well organized, and Dr. Brodrick will turn his attention to the planning of a new wing at Stanford Hospital and the rebuilding of the Lane Hospital, another of the University of Stanford group of institutions.

Prior to undertaking the work at Alameda County, Dr. Brodrick was superintendent of the San Francisco City and County Hospital, San Francisco, which was planned and built under his guidance.

NEWS OF THE HOSPITALS

Connecticut

St. Francis' Hospital, Hartford, is to receive $600,000 from the estate of Thomas F. Garvan, paper manufacturer, for the endowment of free beds.

Florida

Construction work has been started on a new 200-bed hospital to cost approximately $1,000,000, which will replace the old St. Vincent's Hospital, Jacksonville.

Georgia

Dr. John T. McCall has taken over the Frances-Barrian Hospital, Rome, and the name will be changed to the McCall Hospital.

Michigan

The new million dollar addition to the Detroit General Hospital, Detroit, was recently opened.

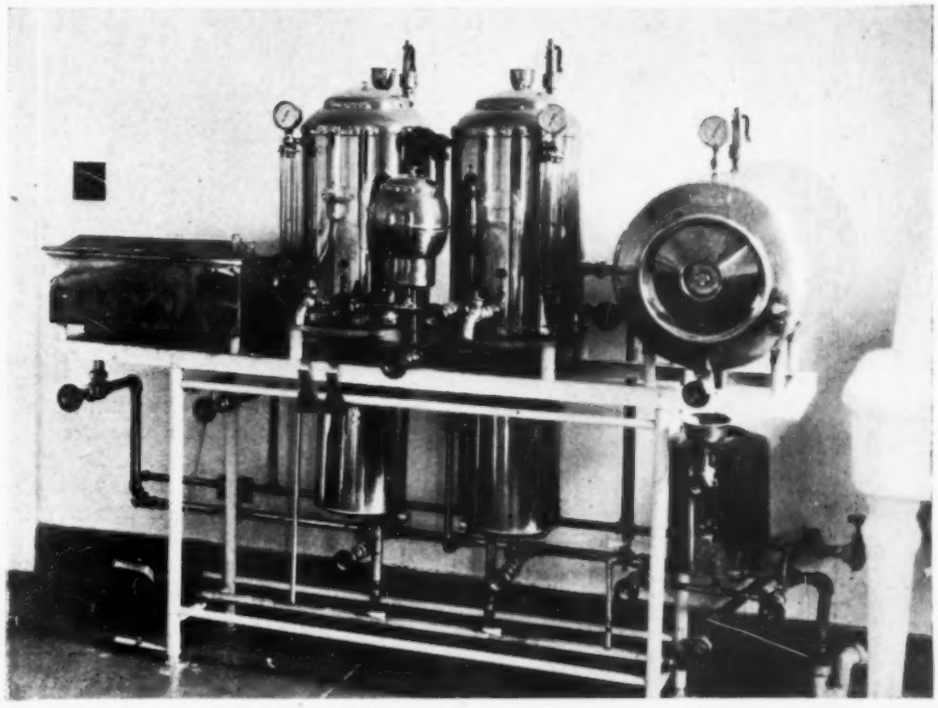
Massachusetts

Half of the $60,000 necessary for the erection of a new nurses' home for the Leominster Hospital, Leominster, has been pledged and construction is expected to begin soon.

Minnesota

Plans for a new $350,000 addition to Abbott Hospital, Minneapolis, have recently been announced by the committee in charge. The new building will be four to six stories high and will be erected on a site adjoining the present building, with a service building in conjunction.

BRAMHALL-DEANE



5 Points of SERVICE

1. Kitchen Equipment
2. Cafeteria Equipment
3. French Ranges
4. Cooking Utensils
5. Sterilizing Apparatus

FOURTEEN years ago, the Newark Maternity Hospital, Newark, N. J. installed their first Bramhall-Deane Dressing Sterilizer, adding one of our Vacuum Sterilizers a few years later and recently installed the group illustrated above.

These sterilizers and the complete line of apparatus we manufacture are illustrated and described in our Sterilizer Blue Book. We will be pleased to mail you a copy.

BRAMHALL-DEANE CO.

261 W. 36th St. **New York City**

For complete index of advertisements refer to the Classified Directory

HEDRICK, MARTS & LUNDY, INC.

CAMPAIGN DIRECTION SERVICE THAT HAS PRODUCED $207,000,000

THE Members of this corporation, and its associated organizations, have directed campaigns totaling $207,582,449 for philanthropic institutions. They offer to your Hospital Board a service in campaign direction made expert through years of experience in serving organizations devoted to the promotion of the public good.

HEDRICK, MARTS & LUNDY, INC.
Harriman National Bank Building
527 FIFTH AVENUE
NEW YORK, N.Y.

Members of the Joint Board of Campaign Counsel and Planning

WRITE FOR A COPY OF FINANCING PHILANTHROPY

Caldwell Door Holders

Noiseless

Especially adapted for Hospital use.

Will hold door on the smoothest floor.

Have the original cup rubber.

Operated by slight pressure of the foot.

Made by
CALDWELL MFG. CO.
60 Industrial St.
Rochester, N. Y.

April 9 is the date set for the opening of the new Veterans' Hospital, Fort Snelling.

Missouri

A seven-story nurses' home for St. John's Hospital, St. Louis, is under construction at a cost of $300,000. This is the third building in the hospital group.

Plans have been drawn for a $100,000 annex for St. Joseph's Hospital, Boonville.

Nebraska

The Nebraska Methodist Episcopal Hospital, Omaha, has received a gift of $25,000, from Mrs. Rachel Lucas, of Wisner, toward the addition of a library and administration unit to the hospital.

New Jersey

Construction will begin at once on the new $700,000 St. Peter's Hospital, New Brunswick. The structure will be five stories high with a capacity of 153 beds. A campaign for funds will be conducted, upon the completion of the building.

New York

St. Marks Hospital, New York, has recently opened its new $500,000 wing.

A $5,000,000 building for the care of psychopathic patients, to replace the psychopathic department at Bellevue Hospital, is to be built in New York. Plans and arrangements will be in the hands of Dr. M. S. Gregory, psychiatrist, who will spend some time abroad studying the principal hospitals for the mentally ill in Europe.

The board of trustees of Jamaica Hospital, Jamaica, N. Y., announces plans for a $350,000 building program, to include the construction of two wings to take care of the increasing needs of the community.

The Woman's Christian Association Hospital, Jamestown, is planning the erection of a new private patient pavilion, an addition to the maternity building and the erection of a new nurses' home. Oliver R. Johnson is the architect and Dr. S. S. Goldwater, New York, consultant.

Ohio

Akron is to have a new $800,000 St. Thomas Hospital and nurses' home, construction of which will begin this spring. The new hospital will have 120 beds and be six stories high, with the nurses' home five stories and basement.

Announcement has been made of the closing of McKinley Hospital, Columbus.

Rhode Island

The Homeopathic Hospital, Providence, is planning the completion of the west wing of the main hospital building, adding one hundred beds to its present capacity, and the erection of a nurses' home to house 120 nurses. Charles F. Neergaard, New York, has been appointed consultant and Messrs. Jackson, Robertson and Adams, associated with Clarke and Howe, architects.

Wisconsin

The new $500,000 west wing and nurses' home of the Milwaukee Hospital, Milwaukee, were opened recently with a public reception and formal dedication. This addition has four floors devoted to private and semi-private rooms and increases the hospital's capacity to 240 beds.

Vancouver General Hospital, Vancouver, B. C., is appealing for $750,000 to replace two temporary wooden buildings erected during the World War.

The Sacred Heart Hospital, Montreal, for the treatment of incurables and tuberculous patients, was recently opened.

Exceptional care is used in making "Canada Dry"

"Canada Dry" is one of the most carefully made beverages sold in this country today.

More than a million dollars have been spent on our plants at Hudson, N. Y., and at Chicago, and into them has gone every modern device for the scientific making of a beverage. The methods by which "Canada Dry" is made are original with us and are not used by any other beverage manufacturer.

The men in charge of production are men of wide experience and some of them have been associated with this company for ten, fifteen and twenty years.

Every step in the manufacture of "Canada Dry" is supervised with unusual care and hourly bacteriological tests are made to insure the unvarying quality of this fine old ginger ale.

We are very proud of our plants and the perfection of the methods used and we hope that it will some day be possible for you to see them for yourself. We will indeed be glad to show you every detail if you will stop a little while on your next trip to Hudson, N. Y., or to Chicago.

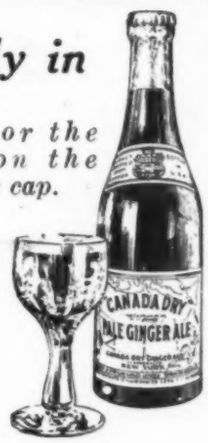
"CANADA DRY"

Reg. U. S. Pat. Off.

Sold only in new bottles

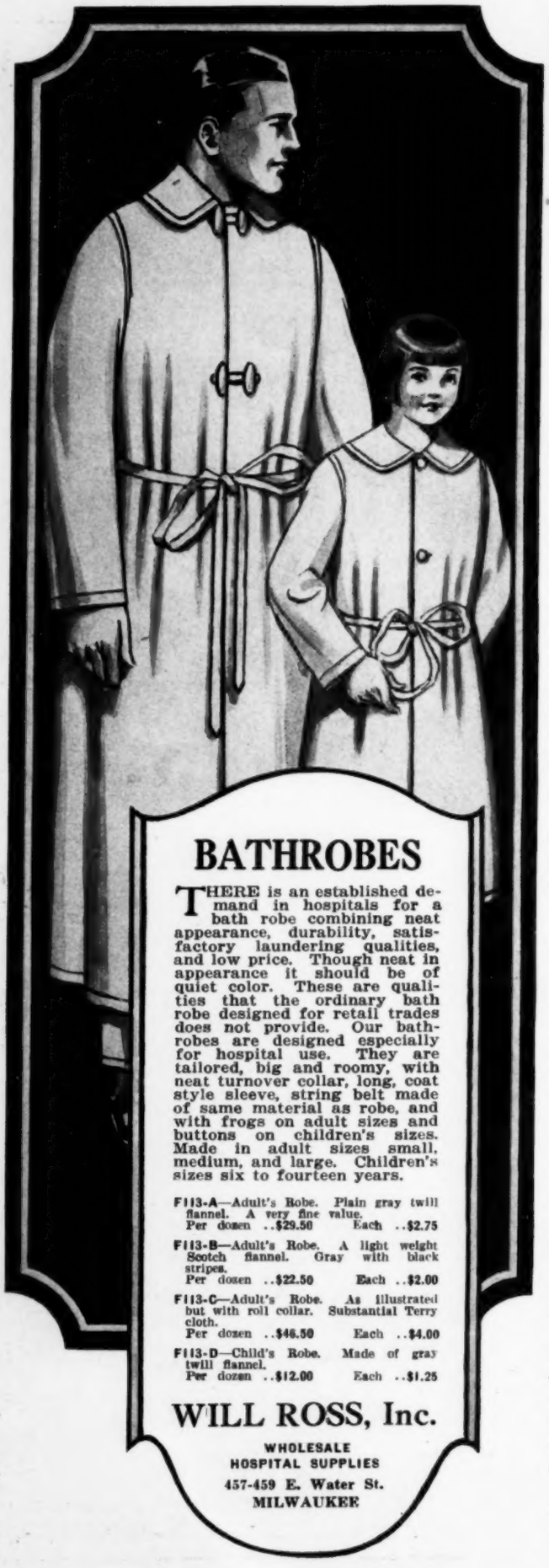
"CANADA DRY"

Look for the name on the bottle cap.



Extract imported from Canada and bottled in the U. S. A. by Canada Dry Ginger Ale, Incorporated, 25 W. 43rd Street, New York, N. Y. In Canada, J. J. McLaughlin Limited. Established 1890

(c) 1927



BATHROBES

THERE is an established demand in hospitals for a bath robe combining neat appearance, durability, satisfactory laundering qualities, and low price. Though neat in appearance it should be of quiet color. These are qualities that the ordinary bath robe designed for retail trades does not provide. Our bathrobes are designed especially for hospital use. They are tailored, big and roomy, with neat turnover collar, long, coat style sleeve, string belt made of same material as robe, and with frogs on adult sizes and buttons on children's sizes. Made in adult sizes small, medium, and large. Children's sizes six to fourteen years.

F113-A—Adult's Robe. Plain gray twill flannel. A very fine value.
Per dozen ..$29.50 Each ..$2.75

F113-B—Adult's Robe. A light weight Scotch flannel. Gray with black stripes.
Per dozen ..$22.50 Each ..$2.00

F113-C—Adult's Robe. As illustrated but with roll collar. Substantial Terry cloth.
Per dozen ..$46.50 Each ..$4.00

F113-D—Child's Robe. Made of gray twill flannel.
Per dozen ..$12.00 Each ..$1.25

WILL ROSS, Inc.

WHOLESALE
HOSPITAL SUPPLIES
457-459 E. Water St.
MILWAUKEE

Book Reviews and Current Hospital Literature

THE SOCIAL WORKER IN A HOSPITAL WARD

By ELSIE WULKOP, with comment by Richard C. Cabot, M.D., Boston, Mass.*

"Human and helpful" is the phrase used on the jacket of the book to describe Miss Wulkop's book, "The Social Worker in the Hospital Ward." The phrase is apt, and unlike many such inscriptions on the covers of our "best sellers," is not at all misleading. Anyone reading the book must be struck by its real human, sympathetic quality. It is obvious that the writer is thoroughly familiar with efficient, modern hospital practice as well as skilled in the science and the art that have come to be known as hospital social service.

Miss Cannon's brief foreword is suggestive and "meaty," even if some of us cannot yet subscribe to her statement that "social service as a part of medical practice is very generally accepted." Her wish may well be father to her thought.

Miss Wulkop's brief "Introductory" (to her case material) should be carefully studied by anyone interested in trying to understand both the technique and the philosophy of hospital social work. Briefly and modestly, but with the confidence based upon long practical experience and careful observation, the writer shows us what she believes should be the right relationships between the different hospital services, if the patient is to receive most benefit. "The patient profits most when he has the services of at least three persons—the doctor, the nurse, the social worker. Each must know, appreciate, and utilize the special skill of the others and therefore respect his own limitations." Anyone familiar with present-day aspects of hospital social work and the difficulties that have attended any attempts at "definition of function" will appreciate Miss Wulkop's remarks.

The book is largely made up of the writer's analyses of thirty-seven illustrative cases and with hers and Dr. Richard Cabot's comments thereon. Possibly rather fewer cases from each of the four selected groups would have served to "indicate what medical-social case work is," and have given us a less bulky volume. What strikes one particularly, however, is the courage that the writer has shown in selecting groups of cases without any particularly dramatic appeal. Many of them are the ordinary sufferers from chronic disablement and poverty that are met with so often in large city hospitals of all types. We cannot agree with Dr. Cabot's comment (page 331) "that few of the patients belong to the impoverished, down-and-out strata of society," when one finds that twelve, about one-third, of the thirty-seven patients, were in receipt of either public or private outdoor relief, while others used or desired the use of free, public institutions.

The analytical schedules placed at the beginning of each case, while of distinct value, especially to the inexperi-

*Houghton Mifflin Company, Boston, Mass.

EATON ALL-WOOL BLANKETS

—withstand hard wear and constant use

THE Eaton is essentially a hospital blanket manufactured upon definite specifications, the direct result of a long series of scientific tests under actual hospital conditions. EATON BLANKETS are standard equipment in hundreds of hospitals thruout the country. The mills where EATON BLANKETS are made have been operated continuously for 90 years.

EATON BLANKETS are made in mills out away from the crowded city where pure air circulating thru every department makes blankets more wholesome, more sanitary and more desirable for hospital use.

Any superintendent or purchasing agent for any hospital where EATON BLANKETS are not already in use is at liberty to send for samples of any style.

This trial order will be filled at our regular quantity price and may be returned for full credit.

Try an EATON BLANKET and be convinced.

STYLES

1001 Brown Heather	301 Blue
2001 Blue Heather	302 Rose
	303 Tan
3001 Natural Gray	304 Lavender

Ask for information regarding materials for Occupational Therapy

HORNER BROTHERS WOOLEN MILLS

Founded 1836

EATON RAPIDS MICHIGAN

This Advertisement Solves Five Problems

HERE are the solutions to five hospital sanitary problems:

What is the quickest and easiest way to open clogged drains?

Answer: Anyone can open them in several minutes with Presto Pipe Opener.

Can tile and porcelain be cleaned easily without scratching the surface?

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enced worker, in helping her to correlate her material, are the least successful part of the book and in some instances are misleading. For example, some of the data classified under "therapeutic assets" might well be considered "case liabilities." In case 14, out of ten "assets" only two could really be considered as assets.

As is natural, the best and most readable part of each case presentation is the "narrative." These narratives serve to give good "case pictures" of the situations as they present themselves to the hospital social worker from day to day, as well as the method and purpose of the work.

The book is a distinct contribution to hospital social work, and will well repay careful study not only by all those directly interested in social work in connection with hospitals but also by groups of social workers and others in the community.—G. L. F.

HISTORY TAKING AND RECORDING

By JAMES A. CORSCADEN, M.D., Associate in Obstetrics and Gynecology, Columbia University, New York.[1]

Dr. Corscaden's book is intended to assist the young history taker, whether he be medical student, lay aid or social service worker, in order that "accuracy and completeness" may be secured in the original history.

The first of the four chapters consists of a discussion of the general principles of taking and recording histories, the following three pointing out in detail the various steps to be taken. The second part is devoted to a list of terms employed, also a list of symptoms to be looked for and an analysis of these symptoms.

The book is an earnest plea for greater emphasis in teaching the technique of history taking.

CHEMISTRY OF FOOD AND NUTRITION

By HENRY C. SHERMAN, Ph.D., Sc.D., New York.[2]

Dr. Sherman's "Chemistry of Food and Nutrition" has been the support and inspiration of all students of nutrition for so long that a review of it is unnecessary. Since it has become so widely adopted as an authentic text, we are glad to have this revised edition.

The text has been completely rewritten and new material added. Several chapters are devoted to the mineral elements and vitamins, thus making them a valuable reference. Chapters on chemical factors in growth, reproduction and lactation and on the problem of the best use of food are, also, excellent additions. This revision makes the book increasingly helpful and students of nutrition will be the more devoted to its use.

THIS BUSINESS OF OPERATIONS

By JAMES RADLEY, Cincinnati.[3]

Mr. Radley, who apparently has recently been a patient in Christ Hospital, Cincinnati, writes interestingly of his experiences in that hospital. He first outlines the general aversion that the layman has toward operations and the total lack of understanding regarding doctors and their methods that is harbored generally by people who do not come in contact with these professions. He tells of being "unwillingly" taken to a hospital for an operation, of his disillusionment, and of the exceptionally fine treatment that he received at the hands of the personnel of Christ Hospital.

[1] Paul B. Hoeber, Inc., New York.
[2] The Macmillan Company, New York.
[3] Digest Publishing Co., Cincinnati, 1927.

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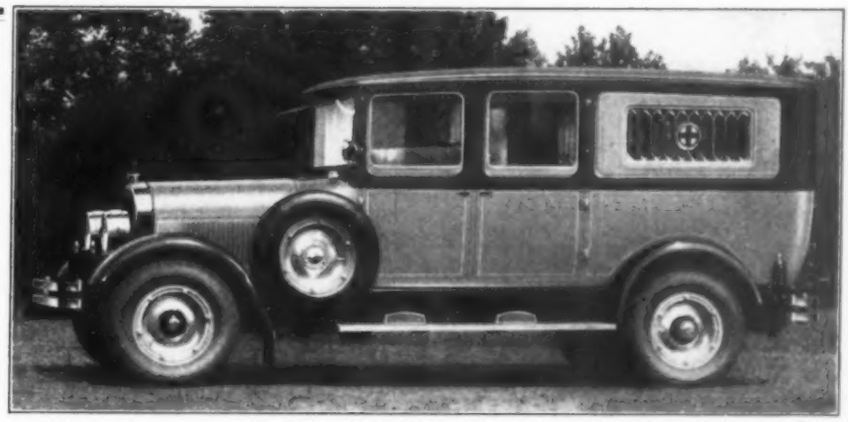

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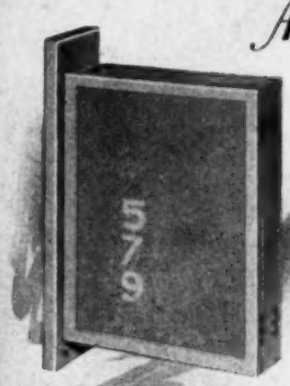

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Mr. Radley has taken it upon himself to spread the gospel of good hospitalization in the United States and it is to be hoped that this little book, which can be read easily within an hour, will find its way to every thinking person, each of whom some day may call upon the hospital for assistance.

For a man who describes himself as an ultra-busy executive and who talks in terms of million dollar deals, Mr. Radley has an excellent literary style and is not without a rather good sense of humor. Perhaps the only surprising reaction one gets to reading the book is that Mr. Radley and men of his type should be content to remain uninformed regarding the importance of hospitals up to the time that they are brought in for the operation. With his present understanding of hospitals, he should make an ideal trustee.—J. A. M.

BOOKS RECEIVED

1927 DIRECTORY OF CONVALESCENT HOMES, issued by Sturgis Research Fund of the Burke Foundation, White Plains, N. Y.

LESSON PLANS IN ETHICS FOR SCHOOLS OF NURSING. Applying Ethical Principles to Nursing Problems. By Charlotte Talley, R.N. G. P. Putnam's Sons, New York, 1927.

PRACTICE OF PREVENTIVE MEDICINE. By J. G. Fitzgerald, M.D., LL.D., Professor of Hygiene and Preventive Medicine and Director, School of Hygiene, and Connaught Laboratories, University of Toronto, Ont.; assisted by Peter Gillespie, M.Sc., M.E.I.C., Professor of Civil Engineering, University of Toronto; and H. M. Lancaster, B.A., Sc., Chief Dominion Analyst, Department of Health of Canada, Ottawa. Second Edition, C. V. Mosby Company, 1926. Price $7.50.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE. By J. J. R. MacLeod, M.B., LL.D., Professor of Physiology, University of Toronto, Ont.; assisted by Roy G. Pearce, A. C. Redfield, N. B. Taylor, and J. M. D. Olmsted. Fifth edition with 291 illustrations. C. V. Mosby Company, St. Louis, Mo. Price $11.

THE ITINERARY OF A BREAKFAST. By John Harvey Kellogg, M.D., Medical Director, Battle Creek Sanitarium, Battle Creek, Mich.; Revised edition. Funk & Wagnalls Company, New York and London, 1926.

A TERMINOLOGY OF DISEASE, to Facilitate the Classification of Histories in Hospitals, by Adrian V. S. Lambert, M.D., Clinical Professor of Surgery, Columbia University; Attending Surgeon, Bellevue Hospital, New York. Third edition, revised. Paul B. Hoeber, Inc., New York, 1926. Price $2.25.

CHILD HEALTH DEMONSTRATION, Mansfield and Richland County, Ohio, 1922 to 1925. Distributed by American Child Health Association, 370 Seventh Avenue, New York City. Boyd Printing Company, Albany, N. Y.

THE CONQUEST OF DISEASE. By Thomas B. Rice, A. M. M. D., Assistant Professor of Sanitary Science, Indiana University School of Medicine, Indianapolis, Ind. The Macmillan Company, New York, 1927. Price $4.50.

TUBERCULOSIS HOSPITALIZATION. A Survey of American Sanatoriums and Hospitals. By Godias J. Drolet, Statistician, New York Tuberculosis and Health Association; Consulting Statistician, Tuberculosis Sanatorium Conference of Metropolitan New York. New York Tuberculosis and Health Association, New York, 1926.

TEXTBOOK OF ANATOMY AND PHYSIOLOGY, by Diana Clifford Kimber, graduate of Bellevue Training School; formerly assistant superintendent, New York City Training School for Nurses, Welfare Island, N. Y.; formerly assistant superintendent, Illinois Training School, Chicago, and Carolyn E. Gray, A.M. (Columbia University), R.N. Seventh edition, revised. The Macmillan Company, New York, 1926.